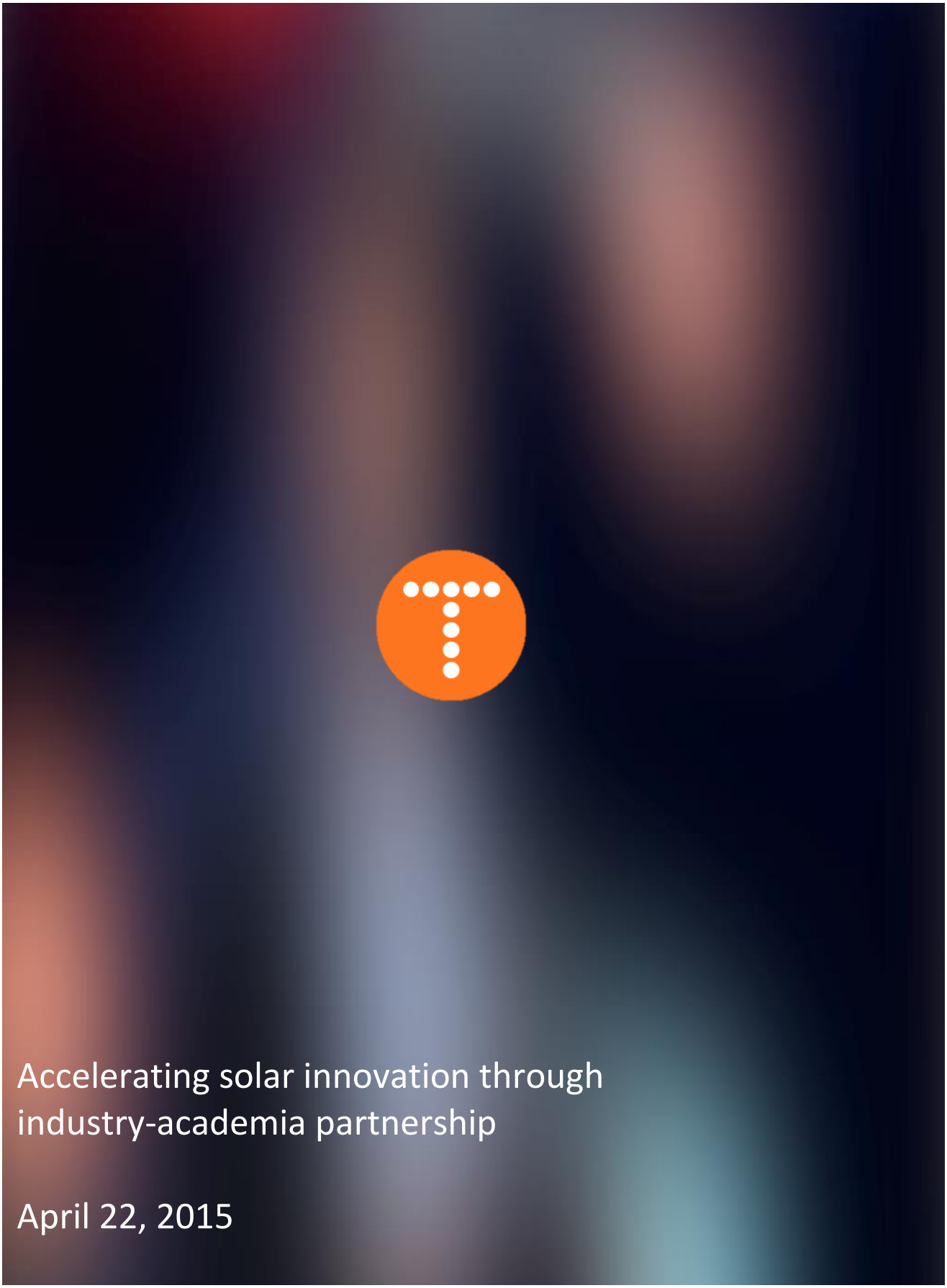
TATA POWER SOLAR

Global Communications
TEXT100



Accelerating solar innovation through industry-academia partnership

April 22, 2015

SYNOPSIS:

- Total number of clips (print+ online + social media): 123
- Total number of print clips: 10
- Total number of online clips: 73
- Electronic media: 2 + 2* (awaiting coverage)
- Total number of social media clips: 36
- Key messages captured:
    - SERVe- First ever prototype of a solar-powered car unveiled on 22nd April, 2015
    - The custom-fit solar panels are designed and manufactured by Tata Power Solar
    - Specifications of the car
    - Manipal University and Tata Power Solar driving innovation through such projects

Key highlights:

- Tata Power Solar mentioned in headlines: 34
- Tata Power Solar mentioned in social media: 22
- High reader traction: 8903 likes, 147 comments and 1793 shares on ET Facebook page
    - The positive reaction prompted ET to tweet about the same

SL. NO	PUBLICATION	PLATFORM	REGION	HEADLINE
PRINT				
1.	Deccan Herald	Print	National	Manipal Students Develop Prototype Of Solar-Powered Car
2.	Deccan Chronicle	Print	National	Manipal University Students Develop Solar-Powered Car
3.	The New Indian Express	Print	National	Team Of Engineering Students Unveils Solar-Powered Car
4.	The Times Of India	Print	National	Engg Students Shine On Road, Build Solar-Powered Car
5.	Financial Chronicle	Print	National	Tata, Manipal Unveil Solar Car
6.	Udayavani	Print	Karnataka	Accelerating Solar Innovation Through Industry-Academia Partnership
7.	Rajasthan Patrika	Print	Karnataka	Accelerating Solar Innovation Through Industry-Academia Partnership
8.	Malayala Manorama	Print	Karnataka	Accelerating Solar Innovation Through Industry-Academia Partnership
9.	Dinamani	Print	Karnataka	Accelerating Solar Innovation Through Industry-Academia Partnership
10.	Eenadu	Print	Karnataka	Accelerating Solar Innovation Through Industry-Academia Partnership
ONLINE				
11.	Deccan Herald	Online	National	Manipal Students Develop Prototype Of Solar-Powered Car
12.	Deccan Chronicle	Online	National	Manipal University Students Develop Solar-Powered Car
13.	The New Indian Express	Online	National	Team Of Engineering Students Unveils Solar-Powered Car
14.	The Times Of India	Online	National	Engg Students Shine On Road, Build Solar-Powered Car
15.	Financial Chronicle	Online	National	Tata, Manipal Unveil Solar Car
16.	The Economic Times	Online	National	Manipal Institute & Tata Power Solar Unveil Solar Car With 60 Kmph Top Speed
17.	Business Standard	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
18.	The Hindu Business Line	Online	National	Manipal Univ Team Builds Solar-Powered Car
19.	NDTV	Online	National	Manipal University Students Design Solar Powered Car
20.	ET Auto	Online	National	Manipal Institute & Tata Power Solar Unveil Solar Car With 60 Kmph Top Speed
21.	Motoroids	Online	National	Manipal Institute Of Technology Students Design Solar-Powered Car Called Serve
22.	Car Trade	Online	National	Tata Power Solar Along With Manipal University Unveils The New Solar Car Prototype
23.	Energetica India	Online	National	Tata Power Solar & Manipal University Unveils Serve, The Solar Prototype
24.	Sahara Samay	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype

25.	Indian Shafaqna	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
26.	News Hunt	Online	National	Manipal University Students Develop Solar-Powered Car
27.	Panchabuta	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
28.	Nampa	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
29.	Electronics Maker	Online	National	University's First Solar Car Prototype- Serve Innovation Unveiled
30.	This Week Bangalore	Online	National	Accelerating Solar Innovation Through Industry-Academia Partnership
31.	India Monitor	Online	National	Manipal Univ Team Builds Solar-Powered Car
32.	India Tech Online	Online	National	Manipal Students Create Solar Car, With A Little Help From Tata Power Solar
33.	Pics 4 News	Online	National	Tata Power Solar And Manipal University Unveil Solar Car
34.	Mega Media News	Online	National	Manipal Institute & Tata Power Solar Unveil Solar Car With 60 Kmph Top Speed
35.	World News	Online	National	Manipal Students Develop Prototype Of Solar-Powered Car
36.	News Now	Online	National	Manipal Univ Team Builds Solar-Powered Car
37.	Team Bhp	Online	National	Manipal Institute Of Technology Students Design Solar-Powered Car, 'Serve'
38.	Brunch News	Online	National	Manipal Students Develop Prototype Of Solar-Powered Car
39.	Sanskriti	Online	National	Manipal University Students Develop Solar-Powered Car
40.	The Economic Times (Auto)	Online	National	Tata Power Solar, Manipal University Unveil Solar Car Prototype (Slideshow)
41.	Auto Tech Updates	Online	National	Manipal University & Tata Power Solar Unveils Solar Car
42.	It's For Home	Online	National	Manipal University Students Design Solar Powered Car
43.	Electronics B2b	Online	National	Manipal University And Tata Power Soalr Unveil Serve, A Solar Car Prototype
44.	Zee News	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
45.	Autocar Professional	Online	National	Tata Power Solar And Manipal University Showcase Ev Prototype
46.	Aaj Tak	Online	National	Solar Energy Car To Soon Run In India
47.	Eet India	Online	National	Manipal University Students Roll Out First Solar Car
48.	Silicon India	Online	National	Tata And Manipal University Unveil New Prototype Solar Car
49.	Seenews Renewables	Online	National	Tata Power Solar, Manipal Uni Unveil Solar Car Prototype
50.	Reddit	Online	National	Tata Power Solar, Manipal University Unveil Solar Car Prototype
51.	Auto Tech Review	Online	National	Manipal University Unveils Solar Car Prototype
52.	Mumbai Mirror	Online	National	Tata Power Solar, Manipal University Unveil Solar Car Prototype

53.	CXO Today	Online	National	Tata Power, Mit Build Solar Cars To 'Go Green'
54.	Electrive.Com	Online	National	Tesla, Chevrolet, Manipal Univ. & Tata Power Solar, Uw-Madison & Bnl
55.	Raftar News	Online	National	Car Powered By Solar Energy
56.	Worldly Post	Online	National	Students From Manipal University Developed A Solar Car
57.	I4c	Online	National	Serve: Solar Electric Road Vehicle
58.	Enterprenuer India	Online	National	Students Of Manipal University Build A Solar-Powered Car
59.	EFY Times	Online	National	Accelerating Solar Innovation Through Industry-Academia Partnership
60.	Samay Live	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
61.	Inooz	Online	National	Manipal University Students Roll Out First Solar Car
62.	News Locker	Online	National	Manipal Institute & Tata Power Solar Unveil Solar Car With 60 Kmph Top Speed
63.	Eq International	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
64.	Headway Solar	Online	National	Manipal Institute & Tata Power Solar Unveil Solar Car With 60 Kmph Top Speed
65.	Education World	Online	National	Manipal Institute Of Technology Launches Its First Prototype Solar Car
66.	Konkan World	Online	National	Manipal University Students Develop Solar-Powered Car
67.	Solar Quarter	Online	National	Accelerating Solar Innovation Through Industry-Academia Partnership
68.	Mangalore Today	Online	National	'Serve' - Solar Electric Road Vehicle, Prototype Car By Manipal Students
69.	Clean Energy Info	Online	National	Tata Power Solar, Manipal Varsity Unveil Solar Car Prototype
70.	Kemmannu	Online	National	Manipal Students Develop Prototype Of Solar-Powered Car
71.	Project Reporter	Online	National	Accelerating Solar Innovation Through Industry-Academia Partnership
72.	Solar Today	Online	National	Accelerating Solar Innovation Through Industry-Academia Partnership
73.	Construction Update	Online	National	Accelerating Solar Innovation Through Industry-Academia Partnership
74.	Auto Car	Online	National	Manipal University And Tata Power Solar Unveil Solar Car Prototype
75.	Tech Telling	Online	National	Manipal University And Tata Power Solar Unveil Solar Car Prototype
76.	Car Shopee.com	Online	National	Manipal University And Tata Power Solar Unveil Solar Car Prototype
77.	Brunch News	Online	National	Manipal University And Tata Power Solar Unveil Solar Car Prototype
78.	Telezkope	Online	National	Solar Car Unveiled By Manipal University & Tata Power Solar

79.	Rush Lane	Online	National	Tata Power And Mit Students Develop Solar Car With 60Kmph Top Speed
80.	Motor Beam	Online	National	Solar Car Unveiled By Manipal University & Tata Power Solar
81.	What's moving India	Online	National	Manipal University Students Built Solar Power Car Named 'SERVe'
82.	Indian Business Review	Online	National	Tata Power unveils solar car prototype jointly with Manipal Institute
83.	Michelin Challenge Bibendum Community	Online	National	Tata Power Unveils Solar Car Prototype Jointly With Manipal Institute
Electronic media				
84.	DD Chandana	Electronic	Regional	Accelerating Solar Innovation Through Industry-Academia Partnership
85.	NDTV 24X7*	Electronic	National	Accelerating Solar Innovation Through Industry-Academia Partnership* (awaiting coverage)
86.	E TV*	Electronic	National	Accelerating Solar Innovation Through Industry-Academia Partnership* (awaiting coverage)
87.	Red FM	Electronic	Regional	Accelerating Solar Innovation Through Industry-Academia Partnership
Social Media				
88.	The Economic Times	Online	National	Facebook
89.	NDTV	Online	National	Twitter
90.	Deccan Chronicle	Online	National	Twitter
91.	The Economic Times	Online	National	Twitter
92.	Electronics Bazaar	Online	National	Twitter
93.	Indian Sanskriti	Online	National	Twitter
94.	Umesh Majhi	Online	National	Twitter
95.	Shashi Shekar Singh	Online	National	Twitter
96.	Avinash Gorakshankar	Online	National	Twitter
97.	Eduardo A Carbajal T	Online	National	Twitter
98.	Biotechnologist 2020	Online	National	Twitter
99.	Ny Solar Power	Online	National	Twitter
100.	Ratan Kumar Giri	Online	National	Twitter
101.	Alpesh	Online	National	Twitter
102.	Kedar Datar	Online	National	Twitter
103.	Premol Daimari	Online	National	Twitter
104.	Shivam Singh	Online	National	Twitter

105.	Ganesh Bhat	Online	National	Twitter
106.	Lexinerus	Online	National	Twitter
107.	Yashvir Dalaya	Online	National	Twitter
108.	Jens Christian Høj	Online	National	Twitter
109.	B.Pac	Online	National	Twitter
110.	Its For Home	Online	National	Twitter
111.	Donna Smith	Online	National	Twitter
112.	Amit Chhangani	Online	National	Twitter
113.	ET Auto	Online	National	Twitter
114.	Nishant Kashyap	Online	National	Twitter
115.	Sunil Jha	Online	National	Twitter
116.	Carmen M. Charles	Online	National	Twitter
117.	Smvdu Katra J&K	Online	National	Twitter
118.	Joseph J Nalloor	Online	National	Twitter
119.	Var India	Online	National	Twitter
120.	Tajinder Pal S Bagga	Online	National	Twitter
121.	India News On Reddit	Online	National	Twitter
122.	Vande Matram	Online	National	Twitter
123.	Viraf S Mehta	Online	National	Twitter

PRINT

TATA POWER SOLAR

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MANIPAL STUDENTS DEVELOP PROTOTYPE OF SOLAR-POWERED CAR
APRIL 22, 2015
DECCAN HERALD

Manipal students develop prototype of solar-powered car

BENGALURU, DHNS: Students of Manipal Institute of Technology have designed the institute's first ever prototype of a solar-powered car called the SERVe (Solar Electric Road Vehicle) and are exploring the possibility of its commercial production.

Tata Power Solar, the country's largest integrated solar player in its effort, rendered its assistance for the student project. Designed by a a team of 27 students who call themselves the SolarMobil team, this four-wheeled, two-seater solar vehicle weighs 590 kg and can reach a speed upto 60 kmph with a cruising speed of 30 Kmph.

The prototype of the solar-powered car developed by the students of Manipal Institute of Technology.

The solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh 35kg and provide up to 960 watts power and weigh less than half of the conventional panels. It also houses a direct solar drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system, a release from the institute stated.

"We are happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Dr P Giridhar Kini, Associate Director, Manipal University.

"We are pleased to be part of the project driven by a talented student-team. The solar car is one of the many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

DH News Service

TATA POWER SOLAR

Global Communications
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MANIPAL UNIVERSITY STUDENTS DEVELOP SOLAR-POWERED CAR
APRIL 22, 2015
DECCAN CHRONICLE

27 Manipal University students develop solar-powered car, SERVe

Runs on Sun: Is this the future?

DC CORRESPONDENT
BENGALURU, APRIL 22

SolarMobil, a team of 27 students from Manipal University, has built a futuristic automobile, which runs solely on solar power.

The car, named SERVe – Solar Electric Road Vehicle, was unveiled at Tata Power Solar Headquarters on Wednesday.

The car's custom-fit solar panels have been designed and manufactured by Tata Power Solar. The team began working on the project in 2012 with Manipal University as their workspace. "Cars are our passion and we wanted to make a model that is conducive to a green and sustainable environment. Everything is done by us right from cutting to welding," said Jeet Bannerjee, Team Manager, SolarMobil.

Weighing 590 kg, the car hit the maximum speed of 60 kmph. The battery energy storage is 6.5kWh and can sustain up to 150 km when fully charged.

The body is Glass Fibre Reinforced Plastic and the suspension has been tested for Indian roads. "The team started everything from the scratch. The students, all from different disciplines, have made practical use of their classroom learning," said Dr P. Giridhar Kini, Associate Director, Manipal University. The approximate production cost of this car is ₹ 25 lakh. Funds were sponsored by companies like Coca-Cola, Agni Motors and Element14.

> "Cars are our passion and we wanted to make a model that is conducive to a green and sustainable environment
> **Jeet Bannerjee**, TEAM MANAGER, SOLARMOBIL

Team members of SolarMobil with Solar Electric Road Vehicle - SERVe - in Bengaluru on Wednesday —DC

Jeet Bannerjee said that their major challenge was convincing the people about their idea, arranging funds for production and procuring materials for building the car.

"We just provided them with a platform for their passion and innovation. "This is not a business proposition and there are no plans to introduce it in the commercial market yet," said Mr Ashish Khanna, Executive Director and CEO, Tata Power Solar.

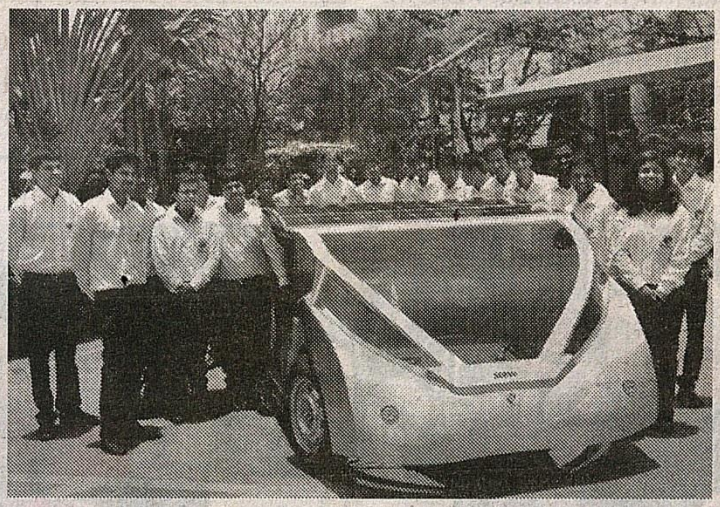
"There is no other joy than driving a self-made car with the belief that it will change the world of automobiles through this new drive towards solar technology," Jeet said.

—Sreyoshi Sen and Mridhula Ravi

TEAM OF ENGINEERING STUDENTS UNVEILS SOLAR-POWERED CAR
APRIL 22, 2015
THE NEW INDIAN EXPRESS

Team of Engineering Students Unveils Solar-powered Car

Express News Service



Students of Manipal Institute of Technology with a prototype of SERVe (Solar Electric Road Vehicle) on Wednesday | JUNISH NATH

Bengaluru: A two-seater solar car that can reach a maximum of 60 kmph, fully designed by college students, was unveiled on Wednesday.

Tata Solar Power backed the initiative by SolarMobil Manipal, a group of 27 students from various engineering streams of Manipal Institute of Technology. The vehicle, weighing 590 kg and built at a cost of roughly ₹25 lakh, was sponsored by various corporate houses. Tata Solar Power provided them with the vital solar modules required for the project. As of now, there are no plans to explore commercial options.

Speaking at the launch of the SERVe (Solar Electric Road Vehicle), Ashish Khanna, CEO, Tata Solar Power, said, "The innovation resonates with our core values. Hence, we have provided the students a platform."

The customised solar panels provided by the group weigh just 35 kg and provide up to 960 watts power.

Elaborating on the joy of driving a self-made car, SolarMobil Manipal team manager Jeet Banerjee said, "The cruising speed is 30 kmph and it can touch up to 60 kmph. It has taken us two years to complete it."

The cruising speed refers to the speed at which the car runs when the solar panels alone are used. It has a battery pack which can help increase the speed up to 60 kmph, he added. "It is the battery which helps the car run in all weather conditions," Jeet said. A prototype was designed earlier but it was too heavy, he added.

Giridhar Kini, associate director, Manipal University, said, "We are extremely happy to see our students have passion for green energy through the launch of SERVe." The body of the car is made of glass fibre-reinforced plastic and the car dimensions are 4400x1790x1380 mm.

Apart from Banerjee, the other core members of the design team include Anudeep Reddy, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh P, Akshat Singh, Amol Grover and Nikhil Gumidelli. The team also has one woman engineer, Sonam Kumari.

TATA POWER SOLAR

Global Communications
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ENGG STUDENTS SHINE ON ROAD, BUILD SOLAR-POWERED CAR
APRIL 22, 2015
THE TIMES OF INDIA

Engg students shine on road, build solar-powered car

TIMES NEWS NETWORK

Bengaluru: Four years ago, 27 engineering students with a love for automobiles put their heads together and came up with the seemingly far-fetched idea of building a solar-powered car from scratch. On Wednesday, the students of Manipal Institute of Technology not only rolled out a sleek machine powered by solar energy but are looking to make it commercially viable.

TOP COPY

"All of us had a passion for automobiles and wanted to do something that would be futuristic and beneficial to society. Green energy is our future," said Jeet Bannerjee, an alumnus of Manipal Insitute of Technology and one of the founding members of team SolarMobil, whose SERVe (Solar Electric Road Vehicle) was launched in Bengaluru on Wednesday.

The team was founded by five students of Manipal Institute of Technology, who then recruited juniors to continue bettering the car after they passed out of college. The car was built from scratch with students often making mistakes and correcting them on the job. The project tested the limits of what they had learnt in the classroom.

Today, the team consists of 27 third and fourth-year engineering students, including one girl. While the initial design and prototype was provided by the founding members, their juniors who later joined the team improved on it to create a commercially viable prototype. "It took us eight months to design the car and another eight to put a basic frame and model together. Since then, we have been testing the vehilce, making it lighter and increasing its efficiency," Bannerjee explained.

He said the biggest challenge they faced was convincing people that they were serious about coming up with a design that would work. "Unless we could convince people, we couldn't raise sponsorship," he said. Bannerjee estimated that the car would cost around Rs 25 lakh but added that they were yet to calculate the actual price.

Nithin Kumar, a final-year mechanical engineering student, recalled how they took their plans and prototype to an electronics exhibition last year, only to get just one company as a sponsor.

The students said they faced tough times over the last two years, with the hardest being during exams. There were sleepless nights when students, after finishing classes, went to the workshop to work on the car till dawn.

The only girl: Sonam Kumari, a third-year student of electrical engineering, is the only girl in the team. "Another girl was recruited with me, but she left after a month when balancing college and the long hours at the workshop became a problem. Her parents were worried and she had to leave," Kumari said.

She is part of the team that takes care of wiring work. "I make sure the solar panels are wired to the rest of the car and power is distributed to the entire car," she said. "It is an important role," she said, proudly. She too had her parents worried with her late hours. "But I told them that this was important. They would have to relax their restrictions because ultimately they will see the results," she said. "They saw the car recently and were so proud of me. They know now that it was worth it."


Chethan Shivakumar

ECO DRIVE: Proud students of Manipal Institute of Technology display their solar car. The two-seater was unveiled at Electronics City on Wednesday

READY TO RACE

A team of students from Manipal Institute of Technology unveiled the university's first prototype solar car. The estimated cost is ₹ 25L

SEATING	Two-seater
BODY	Glass fibre reinforced plastic
MAXIMUM SPEED	60kmph
SOLAR PANELS	1KW solar array Tata Power Solar
DIMENSIONS	4400x1790x1380mm
ENERGY STORAGE	6.5KWh lithium ion cells
WEIGHT	590kg

"It took us eight months to design the car and another eight to put a basic frame and model together. Since then, we have been testing the car, making it lighter and increasing efficiency"
Jeet Bannerjee | TEAM MEMBER

TATA, MANIPAL UNVEIL SOLAR CAR
APRIL 22, 2015
FINANCIAL CHRONICLE

Tata, Manipal unveil solar car

Designed by 27 students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the Tata Solar Power company.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
UDAYAVANI

ಮಣಿಪಾಲ ವಿವಿಯಲ್ಲಿ ದೇಸೀ ಸೌರಶಕ್ತಿ ಕಾರು ಅಭಿವೃದ್ಧಿ!

ಬೆಂಗಳೂರು: ದೇಶದ ಮುಂಚೂಣಿ ತಾಂತ್ರಿಕ ಸಂಸ್ಥೆಯಲ್ಲೊಂದಾದ ಮಣಿಪಾಲ್ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾನಿಯಲದ ವಿದ್ಯಾರ್ಥಿಗಳು ಸ್ಥಳೀಯ ತಂತ್ರಜ್ಞಾನ ಬಳಸಿಕೊಂಡು ಸೌರಶಕ್ತಿ ಕಾರ್ ವಿನ್ಯಾಸಗೊಳಿಸಿದ್ದಾರೆ.

ಟಾಟಾ ಪವರ್ ಸೋಲಾರ್ ಸಂಸ್ಥೆಯ ಸಹಕಾರದೊಂದಿಗೆ ವಿಶ್ವವಿದ್ಯಾಲಯದ 27 ವಿದ್ಯಾರ್ಥಿಗಳನ್ನೊಳಗೊಂಡ ಸೋಲಾರ್ ಮೊಬೈಲ್ ತಂಡ ಸೌರಶಕ್ತಿ ಕಾರನ್ನು ಮೊದಲ ಬಾರಿಗೆ ಅನಾವರಣಗೊಳಿಸಿದೆ.

ಸಂಪೂರ್ಣವಾಗಿ ಸೌರಶಕ್ತಿಯಿಂದಲೇ ಚಲಿಸುವ ಈ ಕಾರು ನಾಲ್ಕು ಚಕ್ರ ಮಾದರಿಯ ವಾಹನವಾಗಿದ್ದು 590 ಕೆ.ಜಿ. ತೂಕ ಹೊಂದಿದೆ. ಎರಡು ಸೀಟುಗಳುಳ್ಳ ಸೌರ ಕಾರು ಪ್ರತಿ ಗಂಟೆಗೆ 60 ಕಿ.ಮೀ.ವರೆಗಿನ ವೇಗದಲ್ಲಿ ಚಲಿಸುತ್ತದೆ.

ಪ್ರಾಜೆಕ್ಟ್‌ಗೆ 25 ಲಕ್ಷ ವೆಚ್ಚ: ಹೊಸೂರು ರಸ್ತೆಯ ಟಾಟಾ ಪವರ್ ಸೋಲಾರ್ ಸಂಸ್ಥೆಯಲ್ಲಿ ಬುಧವಾರ ನಡೆದ ಪತ್ರಿಕಾಗೋಷ್ಠಿಯಲ್ಲಿ ಸೋಲಾರ್ ಮೊಬೈಲ್ ತಂಡ ನಾಯಕ ಜೀತ್ ಬ್ಯಾನರ್ಜಿ ಸೌರಶಕ್ತಿ ಕಾರ್ ಕುರಿತು ಮಾತನಾಡಿದರು. ಸೌರಶಕ್ತಿ ಕಾರು ತಯಾರಿಸುವ ಪ್ರಾಜೆಕ್ಟ್‌ಗೆ ಇದುವರೆಗೆ 25 ಲಕ್ಷ ರೂ. ವೆಚ್ಚವಾಗಿದೆ. ಹಲವು ವೈಫಲ್ಯದ ನಡುವೆ ಎರಡು ವರ್ಷಗಳ ಸತತ ಪರಿಶ್ರಮದಿಂದ ಈ ಕಾರ್ ತಯಾರಿಸಲಾಗಿದೆ. ಟಾಟಾ ಪವರ್ ಸೋಲಾರ್ ಸಂಸ್ಥೆ ಮತ್ತು ಮಣಿಪಾಲ್ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ ಇದಕ್ಕೆ ಸಾಕಷ್ಟು ನೆರವು ನೀಡಿದೆ ಎಂದು ಹೇಳಿದರು.

ಸೋಲಾರ್ ಕಾರಿನ ಜೊತೆ ಎಂಜಿಟಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಹಾಗೂ ಅಧ್ಯಾಪಕ ವರ್ಗ.

ಐದು ವಿದ್ಯಾರ್ಥಿಗಳಿಂದ ಆರಂಭಗೊಂಡ ತಂಡ ಈಗ 27 ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಒಳಗೊಂಡಿದೆ. ಎಂಟು ತಿಂಗಳು ಕಾಲ ವಿನ್ಯಾಸಗೊಳಿಸಲು ಕಾಲಾವಕಾಶ ತೆಗೆದುಕೊಂಡರೆ, ಎಂಟು ತಿಂಗಳು ಉತ್ಪಾದನೆಗಾಗಿ ತೆಗೆದುಕೊಳ್ಳಲಾಗಿದೆ. ಎರಡು ವರ್ಷಗಳ ಅವಧಿಯಲ್ಲಿ ಸಂಪೂರ್ಣ ಕಾರ್ ವಿನ್ಯಾಸಗೊಳಿಸಲಾಗಿದೆ. ವೇಗ, ದಕ್ಷತೆ ಮತ್ತು ದೋಷ ರಹಿತ ಸಂಚಾರವನ್ನು ಖಾತ್ರಿಗೊಳಿಸಲು ಕ್ಯಾನ್-ಬಸ್ ಪ್ರೊಟೋಕಾಲ್ ಇದರಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ. ಇದು ಪರಿಸರಸ್ನೇಹಿಯಾಗಿದ್ದು ಅತ್ಯುತ್ತಮ ಸೌರಫಲಕಗಳನ್ನು ಟಾಟಾ ಪವರ್ ಸೋಲಾರ್ ಸಂಸ್ಥೆ ಒದಗಿಸಿದೆ. ಅಲ್ಯುಮಿನಿಯಂ ಬ್ಯಾಕ್‌ಶೀಟ್ ಮತ್ತು ಹಗುರ ತೂಕದ ಪಾಲಿಮರ್ ಫ್ರಂಟ್ ಶೀಟ್‌ನಿಂದ ರೂಪಿಸಿದ ಅತ್ಯಂತ ದಕ್ಷ ಮೋನೋಕ್ರಿಸ್ಟಲೈನ್ ಸೌರಕೋಶಗಳಿಂದ ಮಾಡಲ್ಪಟ್ಟಿದೆ ಎಂದು ವಿವರಿಸಿದರು.

ಟಾಟಾ ಪವರ್ ಸೋಲಾರ್ ಸಂಸ್ಥೆಯ ಕಾರ್ಯನಿರ್ವಾಹಕ ನಿರ್ದೇಶಕ ಆಶಿಶ್ ಖನ್ನಾ ಮಾತನಾಡಿ, ಚಲನಶೀಲತೆ ಮತ್ತು ವಾಣಿಜ್ಯ ಸಾಧ್ಯತೆಯನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ಸೋಲಾರ್ ಫಲಕಗಳನ್ನು ವಿನ್ಯಾಸಗೊಳಿಸಲಾಗಿದೆ. ಕಾರಿನ ಮೇಲೆ ಸೂಕ್ತವಾಗಿ ಹೊಂದಿಕೆಯಾಗುವಂತೆ ಸೌರಫಲಕಗಳನ್ನು ನಿರ್ಮಿಸಲಾಗಿದೆ ಎಂದರು.

ಪತ್ರಿಕಾಗೋಷ್ಠಿಯಲ್ಲಿ ಮಣಿಪಾಲ್ ವಿವಿ ಸಹ ನಿರ್ದೇಶಕ ಡಾ.ಪಿ.ಗಿರಿಧರ್ ಉಪಸ್ಥಿತರಿದ್ದರು.

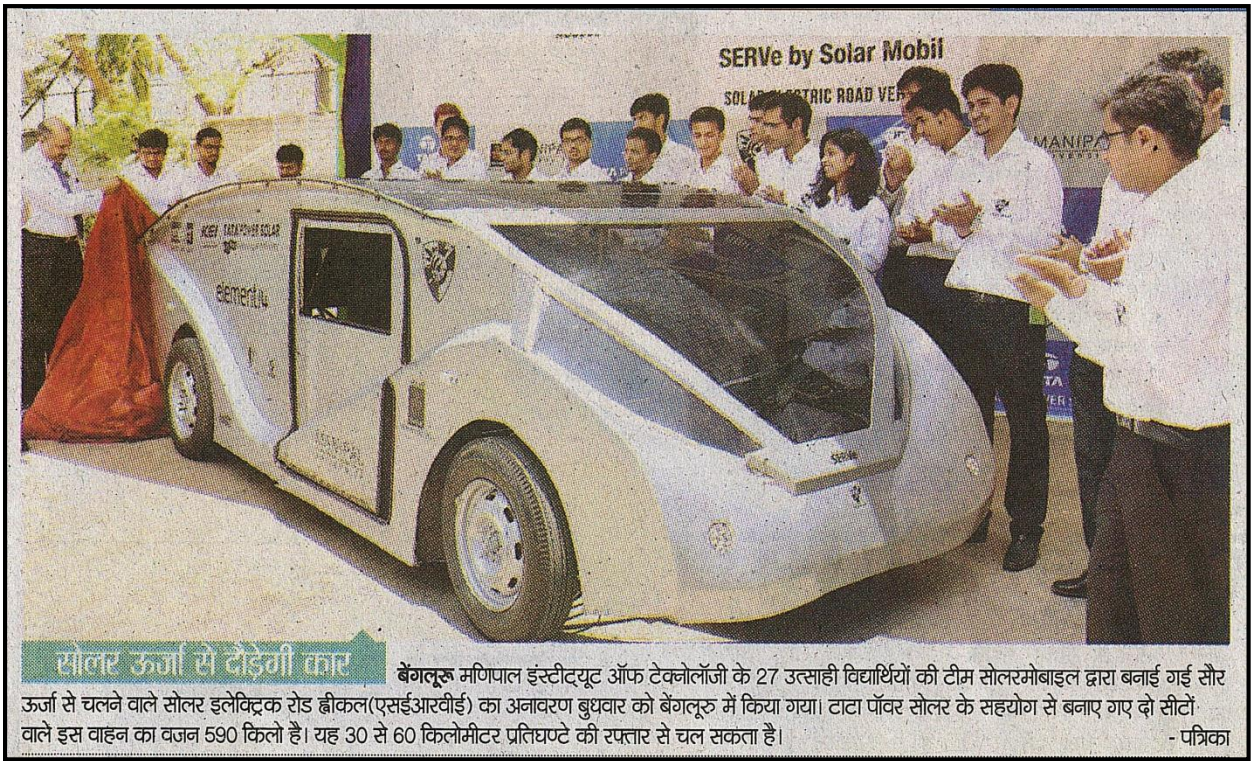
ಏಕೈಕ ವಿದ್ಯಾರ್ಥಿನಿ

ಸೌರಶಕ್ತಿ ಕಾರ್ ತಯಾರಿಕೆಯಲ್ಲಿ ಸೋಲಾರ್ ಮೊಬೈಲ್ ತಂಡದ 27 ವಿದ್ಯಾರ್ಥಿಗಳ ಪೈಕಿ ಒಬ್ಬಳೇ ವಿದ್ಯಾರ್ಥಿನಿ. ಆಕೆ ಬಿಹಾರದ ಪಾಟ್ನಾ ಮೂಲದ ಸೋನಮ್ ಕುಮಾರಿ. ಎಲೆಕ್ಟ್ರಾನಿಕ್ ಎಂಜಿನಿಯರಿಂಗ್‌ನ 3ನೇ ವರ್ಷದ ವಿದ್ಯಾರ್ಥಿನಿಯಾಗಿರುವ ಆಕೆ ವೈರಿಂಗ್ ಮಾಡುವ ಜವಾಬ್ದಾರಿ ನಿರ್ವಹಿಸಿದ್ದರು.

ಈ ಕುರಿತು ಮಾತನಾಡಿದ ಸೋನಮ್, ನಮ್ಮ ಪೋಷಕರು ಆರಂಭದಲ್ಲಿ ಒಪ್ಪಲಿಲ್ಲ ಆದರೆ, ಅವರಿಗೆ ಮನವರಿಕೆ ಮಾಡಿ ವಿದ್ಯಾಭ್ಯಾಸ ಮತ್ತು ಪ್ರೊಜೆಕ್ಟ್ ಬ್ಯಾಲೆನ್ಸ್ ಮಾಡುವುದಾಗಿ ಒಪ್ಪಿಸಿದೆ. ಅಂತಿಮವಾಗಿ ಸೌರಶಕ್ತಿ ಕಾರ್‌ನ ಫಲಿತಾಂಶ ಗಮನಿಸಿ ಪೋಷಕರು ಸಂತೋಷಪಟ್ಟರು.

Summary: The students of Manipal University have designed a solar vehicle using the latest technology. Tata Power Solar helped the team of 27 students from this university to design SolarMobil.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
RAJASTHAN PATRIKA



सोलर ऊर्जा से दौड़ेगी कार

बेंगलूरू मणिपाल इंस्टीट्यूट ऑफ टेक्नोलॉजी के 27 उत्साही विद्यार्थियों की टीम सोलरमोबाइल द्वारा बनाई गई सौर ऊर्जा से चलने वाले सोलर इलेक्ट्रिक रोड व्हीकल(एसईआरवीई) का अनावरण बुधवार को बेंगलूरु में किया गया। टाटा पॉवर सोलर के सहयोग से बनाए गए दो सीटों वाले इस वाहन का वजन 590 किलो है। यह 30 से 60 किलोमीटर प्रतिघण्टे की रफ्तार से चल सकता है। - पत्रिका

Summary: A team of 27 students from Manipal Institute of Technology today launch SolarMobil, a solar electric road vehicle. With help from Tata Power Solar, this two-seater vehicle weights 590kgs.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
MALAYALA MANORAMA

മണിപ്പാൽ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെക്നോളജിയിലെ വിദ്യാർഥികൾ നിർമിച്ച സോളർ കാറിനു സമീപം മണിപ്പാൽ യൂണിവേഴ്സിറ്റി അസോഷ്യേറ്റ് ഡയറക്ടർ ഡോ. പി. ഗിരിധർ കിനി, സോളർ മൊബീൽ ടീം മാനേജർ ജീത്ത ബാനർജി, ടാറ്റ പവർ സോളർ സിഇഒ ആഷിഷ് ഖന എന്നിവർ.

ക്യാംപസിൽ കറങ്ങാൻ സോളർ കാർ; 'മെയ്ഡ് ഇൻ മണിപ്പാൽ'

ബെംഗളൂരു● മണിപ്പാൽ ക്യാംപസിലെ വിദ്യാർഥികൾക്കു ചുറ്റിക്കറങ്ങാൻ ഇനി സൗരോർജ കാറും. മണിപ്പാൽ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെക്നോളജിയിലെ 27 അംഗ വിദ്യാർഥി കൂട്ടായ്മ, ടാറ്റാ പവർ സോളറിന്റെ സാങ്കേതിക സഹായത്തോടെയാണ് മണിക്കൂറിൽ 60 കിലോമീറ്റർ വേഗമുള്ള കാർ നിരത്തിലിറക്കിയത്.

590 കിലോ ഭാരമുള്ള കാർ 960 വാട്ട്സ് വൈദ്യുതിയിലാണ് ഓടുന്നത്.

ഗ്ലാസ് ഫൈബർ പ്ലാസ്റ്റിക്കിൽ നിർമിച്ച വാഹനത്തിൽ ഡ്യുവൽ ഹൈഡ്രോളിക് ലൈൻ, ഒരു കിലോവാട്ടിന്റെ സോളർ പാനൽ, 6.5 കിലോവാട്ടിന്റെ ബാറ്ററി എന്നിവയുണ്ട്. പരിസ്ഥിതി സൗഹാർദ ഗതാഗതസംവിധാനം രൂപപ്പെടുത്തുകയെന്ന ലക്ഷ്യത്തോടെയാണ് വിദ്യാർഥികൾ സൗരോർജ കാർ നിർമിച്ചതെന്ന് മണിപ്പാൽ സർവകലാശാലാ അസോഷ്യേറ്റ് ഡയറക്ടർ ഡോ. പി. ഗിരിധർ കിനി പറഞ്ഞു.

അനുദീപ് റെഡ്ഡി, ജീത് ബാനർജി, ശിവ ഭൂഷൺ റെഡ്ഡി, അഞ്ജൻകുമാർ, വരുൺ ഗുപ്ത, രോഹൻ സഹദേവ്, മാധവ് ലക്കോട്ടിയ, സാമയ് ഗോയങ്ക, പി. സുലേഖ, അക്ഷത് സിങ്, അമോൾ ഗ്രോവർ, നിഖിൽ എന്നിവരടങ്ങിയ സംഘമാണു കാർ ഡിസൈൻ ചെയ്തത്.

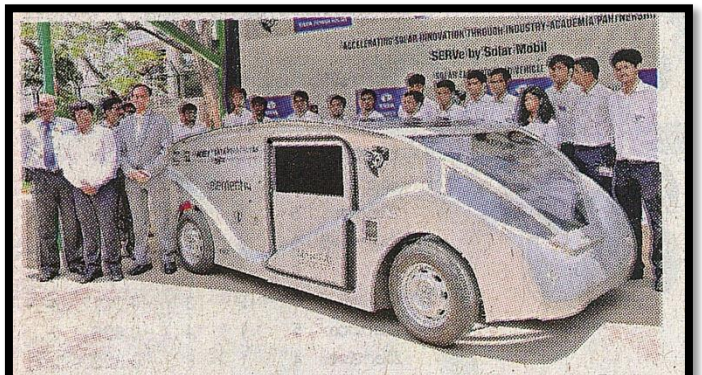
Summary: A group of 27 students from Manipal University with the technical help of Tata Power Solar, have designed a solar car.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
DINAMANI

பெங்களூரில் புதன்கிழமை நடைபெற்ற விழாவில், டாடா பவர் சோலார், மணிப்பால் பல்கலைக்கழகம் சார்பில் தயாரிக்கப்பட்டுள்ள சோலார் காரை அறிமுகம் செய்கிறார் டாடா பவர் சோலார் நிறுவனத்தின் செயல் இயக்குநர் ஆஷிஷ்கன்னா. உடன், பல்கலைக்கழக இணை இயக்குநர் பி.கிரிதர்கினி, சோலார் மொபைல் குழுத் தலைவர் ஜீத்பானர்ஜி உள்ளிட்டோர்.

Summary: Students from Manipal University and Tata Power Solar unveiled a solar car, SolarMobil.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
EENADU



విద్యార్థులు రూపొందించిన సౌర కారును ఆవిష్కరిస్తున్న గిరిధర్ ఖిని, ఆశీష్ ఖన్నా

ఈ కారుకు సౌర శక్తే పెట్రోలు

● **మణిపాల్ వర్సిటీ విద్యార్థులు రూపకల్పన** ● **త్వరలో వాణిజ్య ఉత్పత్తి**

బెంగళూరు, న్యూస్‌టుడే: సౌరశక్తితో దూసుకెళ్లే కారు సిద్ధమవుతోంది. కర్ణాటకలోని మణిపాల్ విశ్వవిద్యాలయం విద్యార్థులు రూపొందించిన నమూనా కారు (ప్రోటోటైప్)ను బుధవారం ఇక్కడి టాటా పవర్ సోలార్ సంస్థ ప్రాంగణంలో ఆవిష్కరించారు. త్వరలోనే వాణిజ్య స్థాయిలో దీని ఉత్పత్తిని చేపట్టనున్నారు. మణిపాల్ విశ్వవిద్యాలయానికి చెందిన 27 మంది విద్యార్థులు ఈ కారును రూపకల్పనలో పాలుపంచుకున్నారు. మణిపాల్ విశ్వవిద్యాలయానికి చెందిన డాక్టర్ గిరిధర్ ఖిని, టాటా సోలార్ సంస్థ కార్యనిర్వాహక సంచాలకుడు ఆశీష్‌ఖన్నా కారును విడుదల చేశారు. 590 కేజీల బరువుగల ఈ కారులో ఇద్దరు ప్రయాణించవచ్చు. 60 కిలోమీటర్ల వేగంతో దూసుకెళ్తుంది. సౌర కారు రూపకల్పనలో విద్యార్థులు అనుదీప్‌రెడ్డి, జీత్ బెనర్జీ, శివభూషణ్‌రెడ్డి, అంజన్‌కుమార్, వరుణ్ గుప్తా, రోహన్ సహదేవ్, మాధవ్ లకోటియా, సోమ గోయెంకా, సురేఖ, అక్షత్ సింగ్, అమోల్ గ్రోవర్, నిఖిల్ గుమిదెల్లి కీలక భూమికను పోషించారు.

Summary: A group of 27 students from Manipal University with the technical help of Tata Power Solar, have designed a solar car.

ONLINE

MANIPAL INSTITUTE & TATA POWER SOLAR UNVEIL SOLAR CAR WITH 60 KMPH TOP SPEED
APRIL 22, 2015
THE ECONOMIC TIMES

A team from Manipal Institute of Technology and Tata Power Solar on Wednesday unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with solar panels designed by Tata Power Solar, said a statement.
Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

"We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Manipal University, Associate Director, Dr P Giridhar Kini, Associate Director, Manipal University said.

According to Ashish Khanna, ED & CEO, Tata Power the project epitomizes Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. "We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Khanna.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 22, 2015
BUSINESS STANDARD

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.

MANIPAL UNIV TEAM BUILDS SOLAR-POWERED CAR
APRIL 22, 2015
THE HINDU BUSINESS LINE

Students from Manipal University have built a solar-powered car using indigenous technology.

The car was built at an investment of Rs. 25 lakh. Tata Power Solar sponsored the project. A team of 27 students participated in the project.

The prototype, designed by the university's SolarMobil team, weighs 590 kg. The two-seater solar car can reach a maximum speed of up to 60 kmph, a press release issued by Tata Power Solar and Manipal University said.

The project cost includes the solar modules, which are the car's major components.

The car can run up to 115 km after a single charge. The prototype took two years to design and manufacture, Jeet Bannerjee, team manager, SolarMobil, said in a press release.

"This project epitomises Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry," Ashish Khanna, ED & CEO, Tata Power Solar said.

MANIPAL UNIVERSITY STUDENTS DESIGN SOLAR POWERED CAR
APRIL 22, 2015
NDTV

As levels of air pollution rise, 27 students of the Manipal Institute of Technology in Karnataka have developed a solar-powered car called SERve or the Solar Electric Road Vehicle to encourage people to go green.

The students hope to make the two-seater car that weights 590 kg and can reach a speed of 60kmph, commercially viable.

"There are not many solar cars present in the world right now. This, I think, is one of the three solar cars, passenger solar cars which are there in the world. The thing is we have tried to optimize the total cost of the manufacturing of the project. So, we've done it within Rs. 25 lakh. We consider that as an achievement," Jeet Bannerjee, leader of the team of students, told NDTV.

The students received help from Tata Power Solar which provided the solar panels for this initiative.
The solar panel is curved to fit the car's surface and its aerodynamic design, and at 35kg, weighs much less than conventional panels.

"The car needs very light weight and high efficient modules in a very aerodynamic structure and that services we have provided to them," said Ashish Khanna, The Executive Director and CEO of Tata Solar Power.

"Our support has been to motivate them, give them the module side, the energy side complete solution to them and work with them because their requirements were also changing as and when they were innovating," he added.

MANIPAL INSTITUTE & TATA POWER SOLAR UNVEIL SOLAR CAR WITH 60 KMPH TOP SPEED
APRIL 22, 2015
ET AUTO

A team from Manipal Institute of Technology and Tata Power Solar on Wednesday unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with solar panels designed by Tata Power Solar, said a statement.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle.

The customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

"We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Manipal University, Associate Director, Dr P Giridhar Kini, Associate Director, Manipal University said.

According to Ashish Khanna, ED & CEO, Tata Power the project epitomizes Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. "We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Khanna.

MANIPAL INSTITUTE OF TECHNOLOGY STUDENTS DESIGN SOLAR-POWERED CAR CALLED SERVE
APRIL 22, 2015
MOTOROIDS

A crack team of 27 students from Manipal Institute of Technology have built a solar-powered car that can hit 60 km/h. The team spent two years designing and developing the SERVe and was sponsored by Tata Power Solar. The latter also supplied the crucial solar panels, which usually amounts for most of the cost for a vehicle such as this. The SERVe weighs around 590 kg and can seat two people. The solar panels have been purpose-built to fit the SERVE's curved body and weigh only 35 kg, which is much less than that of what normal solar panels weigh.

These panels provide 960 watts of solar power to the SERVe, energising the Direct Solar Drive and this is backed up by an efficient energy storage system. All of this combine to give the car the power to maintain its cruising speed, which is 30 km/h. Dr P Giridhar Kini, Associate Director of Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe.

Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation." The SERVe is just a prototype for now, but the team is exploring the possibilities of its commercial feasibility.

TATA POWER SOLAR ALONG WITH MANIPAL UNIVERSITY UNVEILS THE NEW SOLAR CAR PROTOTYPE
APRIL 22, 2015
CAR TRADE

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph. Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.

TATA POWER SOLAR & MANIPAL UNIVERSITY UNVEILS SERVE, THE SOLAR PROTOTYPE
APRIL 22, 2015
ENERGETICA INDIA

Tata Power Solarand Manipal Institute of Technology has unveiled-SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

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Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

The core members of the student design team SolarMobil, include: Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 22, 2015
SAHARA SAMAY

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

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The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause."

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 22, 2015
INDIAN SHAFAQNA

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph. Designed by 27-students of Manipal s SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company. The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also ... Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal s SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer.

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.

TATA POWER SOLAR

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MANIPAL UNIVERSITY STUDENTS DEVELOP SOLAR-POWERED CAR
APRIL 22, 2015
NEWS HUNT

Team members of SolarMobil with Solar Electric Road Vehicle - SERVe - in Bengaluru on Wednesday (Photo: DC) Bengaluru: SolarMobil, a team of 27 students from Manipal University, has built a futuristic automobile, which runs solely on solar power. The car, named SERVe - Solar Electric Road Vehicle, was unveiled at Tata Power Solar Headquarters on Wednesday. The car's custom-fit solar panels have been designed and manufactured by Tata Power Solar.

The team began working on the project in 2012 with Manipal University as their workspace. "Cars are our passion and we wanted to make a model that is conducive to a green and sustainable environment. Everything is done by us right from cutting to welding," said Jeet Bannerjee, Team Manager, SolarMobil. Weighing 590 kg, the car hit the maximum speed of 60 kmph. The battery energy storage is 6.5kWh and can sustain up to 150 km when fully charged. The body is Glass Fibre Reinforced Plastic and the suspension has been tested.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 22, 2015
PANCHABUTA

According to reports, Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."
Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 22, 2015
NAMPA

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power.

UNIVERSITY'S FIRST SOLAR CAR PROTOTYPE- SERVE INNOVATION UNVEILED
APRIL 22, 2015
ELECTRONICS MAKER

Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today – SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

The core members of the student design team SolarMobil, include: Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

Project Details
Started in 2011 under the name, SolarMobil, a team on 27 students from Manipal Institute of Technology, perusing different disciplines, came together with the objective to design a commercial viable solar car. The project was aimed at promoting green vehicles among end-consumers. SolarMobil Manipal collaborated with Tata Power Solar to source the car's custom-fit solar panels and meet with the company's experts to understand solar technology.

TATA POWER SOLAR

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ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 22, 2015
THIS WEEK BANGALORE

Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today – SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

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MANIPAL UNIV TEAM BUILDS SOLAR-POWERED CAR
APRIL 22, 2015
INDIA MONITOR

Students from Manipal University have built a solar-powered car using indigenous technology.

The car was built at an investment of Rs. 25 lakh. Tata Power Solar sponsored the project. A team of 27 students participated in the project.

The prototype, designed by the university's SolarMobil team, weighs 590 kg. The two-seater solar car can reach a maximum speed of up to 60 kmph, a press release issued by Tata Power Solar and Manipal University said.

The project cost includes the solar modules, which are the car's major components.

The car can run up to 115 km after a single charge. The prototype took two years to design and manufacture, Jeet Bannerjee, team manager, SolarMobil, said in a press release.

"This project epitomises Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry," Ashish Khanna, ED & CEO, Tata Power Solar said.

TATA POWER SOLAR

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MANIPAL STUDENTS CREATE SOLAR CAR, WITH A LITTLE HELP FROM TATA POWER SOLAR
APRIL 22, 2015
INDIA TECH ONLINE

Manipal University and Tata T Power Solar, joined today to unveil - SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

Designed by students of the SolarMobil team, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is a showcase for industry-academia efforts that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

The solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

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Says Dr P Giridhar Kini, Associate Director, Manipal University: "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

Adds Ashish Khanna, ED & CEO, Tata Power Solar: "We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry."

SolarMobil Manipal is a team of students from various branches of Manipal Institute of Technology. The team's aim is to successfully design, test and build a vehicle powered solely by solar energy, and to showcase it's car across world.

TATA POWER SOLAR

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TATA POWER SOLAR AND MANIPAL UNIVERSITY UNVEIL SOLAR CAR
APRIL 22, 2015
PICS 4 NEWS

Manipal University and Tata Power Solar in the presence of Dr P Giridhar Kini, Associate Director, Manipal University, Jeet Bannerjee, Team Manager, SolarMobil and Ashish Khanna, ED and CEO, Tata Power Solar unveiled the SERVe, a solar car prototype aimed at commercial usage, by Team SolarMobil at Tata Power Solar Office at Electronic City, in Bengaluru on Wednesday 22nd April 2015.

TATA POWER SOLAR

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MANIPAL INSTITUTE & TATA POWER SOLAR UNVEIL SOLAR CAR WITH 60 KMPH TOP SPEED
APRIL 22, 2015
MEGA MEDIA NEWS

A team from Manipal Institute of Technology and Tata Power Solar on Wednesday unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

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According to Ashish Khanna, ED & CEO, Tata Power the project epitomizes Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. "We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Khanna.

TATA POWER SOLAR

Global Communications
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MANIPAL STUDENTS DEVELOP PROTOTYPE OF SOLAR-POWERED CAR
APRIL 22, 2015
WORLD NEWS

Students of Manipal Institute of Technology have designed the institute's first ever prototype of a solar-powered car called the SERVe (Solar Electric Road Vehicle) and are exploring the possibility of its commercial production.

Tata Power Solar, the country's largest integrated solar player in its effort, rendered its assistance for the student project. Designed by a a team of 27 students who call themselves the SolarMobil team, this four-wheeled, two-seater solar vehicle weighs 590 kg and can reach a speed upto 60 kmph with a cruising speed of 30 Kmph.

The solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh 35kg and provide up to 960 watts power and weigh less than half of the conventional panels. It also houses a direct solar drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system, a release from the institute stated.
"We are happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Dr P Giridhar Kini, Associate Director, Manipal University.

"We are pleased to be part of the project driven by a talented student-team. The solar car is one of the many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

MANIPAL UNIV TEAM BUILDS SOLAR-POWERED CAR
APRIL 22, 2015
NEWS NOW

Students of Manipal Institute of Technology have designed the institute's first ever prototype of a solar-powered car called the SERVe (Solar Electric Road Vehicle) and are exploring the possibility of its commercial production.

Tata Power Solar, the country's largest integrated solar player in its effort, rendered its assistance for the student project. Designed by a a team of 27 students who call themselves the SolarMobil team, this four-wheeled, two-seater solar vehicle weighs 590 kg and can reach a speed upto 60 kmph with a cruising speed of 30 Kmph.

The solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh 35kg and provide up to 960 watts power and weigh less than half of the conventional panels. It also houses a direct solar drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system, a release from the institute stated.

"We are happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Dr P Giridhar Kini, Associate Director, Manipal University.

"We are pleased to be part of the project driven by a talented student-team. The solar car is one of the many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

MANIPAL INSTITUTE OF TECHNOLOGY STUDENTS DESIGN SOLAR-POWERED CAR, 'SERVE'
APRIL 22, 2015
TEAM BHP

Students of Manipal Institute of Technology have designed the institute's first ever prototype of a solar-powered car called the SERVe (Solar Electric Road Vehicle). They are contemplating the idea of commercial production viability.

- Tata Power Solar, rendered its assistance for the student project.
- Designed by a team of 27 students, The SolarMobil team
- Four-wheeled, two-seater
- Weighs 590 kg
- Top speed of 60 kmph with a cruising speed of 30 Kmph.

MANIPAL STUDENTS DEVELOP PROTOTYPE OF SOLAR-POWERED CAR
APRIL 22, 2015
BRUNCH NEWS

Students of Manipal Institute of Technology have designed the institute's first ever prototype of a solar-powered car called the SERVe (Solar Electric Road Vehicle) and are exploring the possibility of its commercial production. Tata Power Solar, the country's largest integrated solar player in its effort, rendered its assistance for the student project.

Designed by a a team of 27 students who call themselves the SolarMobil team, this four-wheeled, two-seater solar vehicle weighs 590 kg and can reach a speed upto 60 kmph with a cruising speed of 30 Kmph. The solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh 35kg and provide up to 960 watts power

TATA POWER SOLAR

Global Communications
TEXT100

MANIPAL UNIVERSITY STUDENTS DEVELOP SOLAR-POWERED CAR
APRIL 22, 2015
SANSKRITI

SolarMobil, a team of 27 students from Manipal University, has built a futuristic automobile, which runs solely on solar power. The car, named SERVe – Solar Electric Road Vehicle, was unveiled at Tata Power Solar Headquarters on Wednesday.

The car's custom-fit solar panels have been designed and manufactured by Tata Power Solar. The team began working on the project in 2012 with Manipal University as their workspace. "Cars are our passion and we wanted to make a model that is conducive to a green and sustainable environment. Everything is done by us right from cutting to welding," said Jeet Bannerjee, Team Manager, SolarMobil.

Weighing 590 kg, the car hit the maximum speed of 60 kmph. The battery energy storage is 6.5kWh and can sustain up to 150 km when fully charged. The body is Glass Fibre Reinforced Plastic and the suspension has been tested for Indian roads. "The team started everything from the scratch. The students, all from different disciplines, have made practical use of their classroom learning," said Dr P. Giridhar Kini, Associate Director, Manipal University.

The approximate production cost of this car is Rs 25 lakh. Funds were sponsored by companies like Coca-Cola, Agni Motors and Element14. Jeet Bannerjee said that their major challenge was convincing the people about their idea, arranging funds for production and procuring materials for building the car.

"We just provided them with a platform for their passion and innovation. "This is not a business proposition and there are no plans to introduce it in the commercial market yet," said Mr Ashish Khanna, Executive Director and CEO, Tata Power Solar.

"There is no other joy than driving a self-made car with the belief that it will change the world of automobiles through this new drive towards solar technology," Jeet said.

TATA POWER SOLAR, MANIPAL UNIVERSITY UNVEIL SOLAR CAR PROTOTYPE (SLIDESHOW)
APRIL 23, 2015
THE ECONOMIC TIMES (AUTO)

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power.

The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, 'the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer.'

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying 'the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.'

MANIPAL UNIVERSITY & TATA POWER SOLAR UNVEILS SOLAR CAR
APRIL 23, 2015
AUTO TECH UPDATES

Manipal University & Tata Power Solar unveil SERVe, a solar car prototype aimed at commercial usage, by Team SolarMobil

Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today – SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

The core members of the student design team SolarMobil, include: Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

MANIPAL UNIVERSITY STUDENTS DESIGN SOLAR POWERED CAR
APRIL 23, 2015
IT'S FOR HOME

As levels of air pollution rise, 27 students of the Manipal Institute of Technology in Karnataka have developed a solar-powered car called SERve or the Solar Electric Road Vehicle to encourage people to go green.

The students hope to make the two-seater car that weights 590 kg and can reach a speed of 60kmph, commercially viable.

"There are not many solar cars present in the world right now. This, I think, is one of the three solar cars, passenger solar cars which are there in the world. The thing is we have tried to optimize the total cost of the manufacturing of the project. So, we've done it within Rs. 25 lakh. We consider that as an achievement," Jeet Bannerjee, leader of the team of students, told NDTV.

The students received help from Tata Power Solar which provided the solar panels for this initiative.
The solar panel is curved to fit the car's surface and its aerodynamic design, and at 35kg, weighs much less than conventional panels.

"The car needs very light weight and high efficient modules in a very aerodynamic structure and that services we have provided to them," said Ashish Khanna, The Executive Director and CEO of Tata Solar Power.

"Our support has been to motivate them, give them the module side, the energy side complete solution to them and work with them because their requirements were also changing as and when they were innovating," he added.

TATA POWER SOLAR

Global Communications
TEXT100

MANIPAL UNIVERSITY AND TATA POWER SOALR UNVEIL SERVE, A SOLAR CAR PROTOTYPE
APRIL 23, 2015
ELECTRONICS B2B

April 23, 2015: Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today – SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, **Dr P Giridhar Kini, Associate Director, Manipal University** said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organisation but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said **Ashish Khanna, ED & CEO, Tata Power Solar.**

The core members of the student design team SolarMobil, include: Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

About Manipal University:

Manipal University is synonymous with excellence in higher education. Over 28,000 students from 57 different nations live, learn and play in the sprawling University town, nestled on a plateau in Karnataka's Udupi district. It also has nearly 2500 faculty and almost 10000 other support and service staff, who cater to the various professional institutions in Health Sciences, Engineering, Management, Communication and Humanities.

Every institute has world class facilities and pedagogy, which are constantly reviewed and upgraded to reflect the latest trends and developments in higher education. Some of its premier institutes are the Kasturba Medical College, and the Manipal Institute of Technology.

About SolarMobil Manipal Team:

SolarMobil Manipal is a team of students from various branches of Manipal Institute of Technology. The team's aim is to successfully design, test and build a vehicle powered solely by solar energy, and to showcase it's car across world. The team plans to approach every project with drive, innovation and efficiency as the cornerstones, around which it hopes to build a wealth of experience & knowledge.

The formation of SolarMobil.manipal was initiated in August 2011 and since then, the team has involved themselves in research in the field of "new age" solar arrays, high output "Eco-friendly" batteries and the latest super-efficiency motors. The team consists of students from different fields of technicality – Mechanical, Electrical, Instrumentation, Aeronautical, Automobile and Mechatronics all combining their skills, knowledge and experience to make a car we can truly be proud of.

About Tata Power Solar:

Tata Power Solar (TPS), with 25 years of deep domain expertise, is one of the pioneering solar manufacturers in the world and India's largest specialised EPC player. Founded in 1989, the company was originally formed as a joint venture between Tata Power and British Petroleum Solar (BP Solar). As a pioneer and market leader in the solar space, headquartered in Bangalore, TPS now operates independently as a wholly owned subsidiary of Tata Power. TPS has a strong national presence with 8 regional offices, 40 authorized service centres plus a network of more than 1000 channel partners nationwide.

As one of the largest solar manufacturers in India, TPS operates three world-class manufacturing units in Bangalore, with a production capacity of 200 MW of modules and 180 MW of cells. It has completed more than 160 MW of ground-mount utility scale and 40 MW of rooftop and distributed generation projects across the country as of FY14. It also offers a diverse line of solar products for both urban and rural markets – these include water heaters, home lighting, street lighting, power packs, and water pumps among others. TPS is committed to enabling solar everywhere and aims to provide energy access to millions of people across the country via its integrated solar solutions.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 22
ZEE NEWS

Tata Power Solar and Manipal University on Wednesday unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause."

TATA POWER SOLAR AND MANIPAL UNIVERSITY SHOWCASE EV PROTOTYPE
APRIL 23, 2015
AUTOCAR PROFESSIONAL

Tata Power Solar, India's largest integrated solar player, and Manipal Institute of Technology today unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car. Designed by students of the SolarMobil team, with an intention of commercial usage, the vehicle is custom-fitted with bespoke solar panels designed by Tata Power Solar.

This two-seater, four-wheeled prototype, run solely on solar energy, weighs 590kg, can reach up to 60kph with a cruising speed of 30kph. The solar panels are custom-made to fit the car's curved surface enhancing aerodynamics and vehicle performance. The highly efficient panels weigh 35kg, less than half of conventional panels, and provide up to 960 watts power.

The car also houses a direct solar drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system. Speaking on the project, Dr P Giridhar Kini, associate director, Manipal University, said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities' participation for this cause, since they can play an important role in driving innovation in partnership with the industry," said Ashish Khanna, executive director and CEO, Tata Power Solar.

TATA POWER SOLAR

Global Communications
TEXT100

SOLAR ENERGY CAR TO SOON RUN IN INDIA
APRIL 23, 2015
AAJ TAK

कुछ दिनों पहले भारत के लोगों ने सोलर एनर्जी से चलने वाले दुनिया के पहले विमान 'सोलर इंप्लस' को देखा. अब जल्द ही भारतीयों के सामने सोलर एनर्जी से चलने वाली पहली स्वदेशी कार होगी.

यह कार टाटा पावर और मणिपाल यूनिवर्सिटी के छात्रों द्वारा डिजाइन की गई सोलर इलेक्ट्रिक कार होगी. इसका शुरुआती मॉडल बुधवार को पेश किया गया. यह कार अधिकतम 60 किलोमीटर प्रति घंटे की रफ्तार से दौड़ सकती है.

मणिपाल की सोलरमोबिल टीम के 27 विद्यार्थियों द्वारा वाणिज्यिक इस्तेमाल के लिए डिजाइन की गई 590 किलोग्राम की यह कार कंपनी द्वारा उपलब्ध कराई गई तकनीकी सपोर्ट पर परिचालन करती है.

दो सीटों वाली इस कार पर सोलर पैनल लगे हैं जिसे टाटा पावर सोलर से लिया गया है. इन पैनलों का वजन 35 किलोग्राम है और ये 960 वाट तक बिजली उपलब्ध करा सकते हैं.

MANIPAL UNIVERSITY STUDENTS ROLL OUT FIRST SOLAR CAR
APRIL 23, 2015
EET INDIA

Students from the SolarMobil team at Manipal Institute of Technology (MIT) unveiled their first prototype solar car, which is targeted at commercial usage. Dubbed as SERVe (Solar Electric Road Vehicle), the solar car is custom-fit with solar panels designed by Tata Solar Power. It is a good example of an industry-academia effort that will help increase the role of solar innovation in green mobility.

MIT is a constituent of Manipal University.

The four-wheeled prototype that runs solely on solar energy is designed by the above team of 27 student enthusiasts. Weighing 590kg, this two-seater solar car can reach up to 60kph with a cruising speed of 30kph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface, enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh just 35kg and provide up to 960W power. They also weigh less than half of the conventional panels.

The car houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

The vehicle's three main design and fabrication components include:

Customised solar panels:
The customised solar panels provided by Tata Power Solar are made of high efficiency monocrystalline solar cells encapsulated with an aluminium backsheet and a light-weight polymer front sheet. These lightweight solar panels are placed along the curved surface of the car's roof, ensuring that the aerodynamics is not compromised.

High-end battery system:
The car's energy density Li-ion battery pack allows a speed of 150km on a full charge. This battery management system monitors the individual strings of the battery pack, ensuring proper health and safety. It is also fitted with a CAN-bus protocol to ensure fast, efficient and error-free communication.

Data acquisition:
The car's data acquisition system uses Rasberry-Pi; this central unit acquires data from the battery management system, maximum power point tracker and various others sensors to ensure proper functioning of all the systems. The data is used to analyse the vehicle's performance.

Speaking on the project, Dr P. Giridhar Kini, associate director at Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe."

The core members of the student design team, SolarMobil, include Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

TATA AND MANIPAL UNIVERSITY UNVEIL NEW PROTOTYPE SOLAR CAR
APRIL 23, 2015
SILICON INDIA

Tata Power Solar and Manipal University today showcased the prototype of a solar electric car. The car was designed by Manipal University's students' twenty-seven member SolarMobile Team, in collaboration with Tata Power Solar who produced the solar panels. The project was named SERVe short for Solar Electric Road Vehicle.

The two-seater car weighs 590 Kg and the solar panels weigh just 35 kg (half the weight of conventional solar panels) and provide up to 960 watts of power. The car was designed keeping mobility and commercial viability in mind, so the solar panels have been built to fit around the car's curved shape. This enhances the aerodynamics of the vehicle and enables it to maintain a high performance. The car has a direct solar drive that maintains the cruising speed of 30kmph and is supplemented by extra power from a high-end energy storage system. The car has a top speed of 60 kmph.

S. P Giridhar Kini, associate director, Manipal University, says "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. The industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive, Ashish Khanna also responded to economic times,"the project epitomizes our belief in innovation. We not only encourage innovation within our organization but also propagate university participation for this cause."

TATA POWER SOLAR, MANIPAL UNI UNVEIL SOLAR CAR PROTOTYPE
APRIL 23, 2015
SEENEWS RENEWABLES

Indian solar products maker Tata Power Solar and the Manipal University said Wednesday they are ready to start exploring the commercial viability of their solar electric road vehicle (SERVe).

The Team SolarMobil at the Manipal Institute of Technology have equipped their first prototype solar car with 960 W of lighter-than-usual solar panels, custom-designed by Tata Power Solar in accordance with the car's aerodynamic curved surface. The company also provided the INR 2.5 million (USD 40,000/EUR 37,000) in funding for the project.

The two-seat model features the Direct Solar Drive technology, which maintains the speed, and there is also an energy storage system for extra power. All in all, it will be able to travel as much as 115 kilometers (71.5 miles) after one charge. The maximum speed is 60 kilometers per hour.

It took the 27 people in the SolarMobil team two years to design and build the car.

TATA POWER SOLAR

Global Communications
TEXT100

TATA POWER SOLAR, MANIPAL UNIVERSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 23, 2015
REDDIT

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

MANIPAL UNIVERSITY UNVEILS SOLAR CAR PROTOTYPE
APRIL 24, 2015
AUTO TECH REVIEW

Manipal Institute of Technology (MIT), along with Tata Power Solar has unveiled its first prototype Solar Electric Road Vehicle, called SERVe. SERVe was developed by the SolarMobil team, which is a group of 27 students from MIT pursuing different disciplines, having the objective of designing a commercially- viable solar car. The solar panels on the SERVe have been supplied by Tata Power Solar, in the form a customised module for the specific design and performance needs of the car.

SERVe is a two-seater car that runs completely on solar energy, having the capability to reach speeds up to 60 km/h, with a cruising speed of 30 km/h. The car features a chromoly steel tubular space frame chassis with a glass fibre reinforced plastic body, resulting in a total weight of 590 kg. Energy storage of the vehicle comes in the form of 6.5 KWh lithium-ion cells, which get fully-charged in about six hours through the solar panels. The SERVe is claimed to have a total range of 150 km, when powered with both the solar modules, as well as the battery.

The solar panels in the SERVe were designed keeping the car's curved surface in mind, in order to enhance aerodynamics and performance of the vehicle. The solar panels are made of high efficiency monocrystalline solar cells encapsulated with an aluminium backsheet and a light-weight polymer front sheet. The customised panels weigh about 35 kg, less than half of conventional panels, and provide up to 960 watts power, Tata Power Solar said. The car also features a Direct Solar Drive to maintain the cruising speed, which is supplemented by extra power from its energy storage system.

Jeet Bannerjee, MIT alumni and a founding member of SolarMobil, said SERVe took eight months to design, and another eight months to manufacture. He added that the car was completely built in MIT's campus, with the use of all the laboratories and workshops, with a total project cost of about 25 lakh.

The company is pleased to be part this project driven by a talented student-team, said Ashish Khanna, ED and CEO, Tata Power Solar. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy, Khanna added. Tata Power Solar firmly believes that India's students will act as a key contributor in the progress of the solar industry, he said.

TATA POWER SOLAR, MANIPAL UNIVERSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 23, 2015
MUMBAI MIRROR

Tata Power Solar and Manipal University unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph

TATA POWER, MIT BUILD SOLAR CARS TO 'GO GREEN'
APRIL 23, 2015
CXO TODAY

At a time when high fuel prices are pushing consumers to look for new options in the car market, Tata Power Solar joined hand with Manipal Institute of Technology (MIT) in Karnataka to build a solar-powered car called SERve or the Solar Electric Road Vehicle, encouraging people to go green. It is also an example of an industry-academia collaboration to help increase the role of solar innovation in green mobility.

At present there are very few solar cars in the market. Earlier, Mahindra & Mahindra Ltd launched a car, called e2o that runs on lithium ion batteries that allow it to travel 100 kilometers in one charge. The vehicle, the only four-seater electric car in India, can also be solar charged, the company said in a statement.

Tata Power and MIT plan to make the two-seater car that weighs 590 kg and can reach a speed of 60kmph, commercially viable. "The car needs very light weight and high efficient modules in a very aerodynamic structure and that services we have provided to them," said Ashish Khanna, The Executive Director and CEO of Tata Solar Power.

"Our support has been to motivate them, give them the module side, the energy side complete solution to them and work with them because their requirements were also changing as and when they were innovating," he added.

For this initiative, Tata Power Solar provided the solar panels to MIT. The solar panel is curved to fit the car's surface and its aerodynamic design, and at 35kg, weighs much less than conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University told CXOtoday, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

The amount of energy from the sun is very high in India, even though its amount of consumption is hardly utilized in the country. It is estimated by industry experts that millions of homes, offices and cars around the world are going to switch to solar energy in the next few years.

TESLA, CHEVROLET, MANIPAL UNIV. & TATA POWER SOLAR, UW-MADISON & BNL
APRIL 23, 2015
ELECTRIVE.COM

Lightweight solar EV: Indian Manipal Institute of Technology and Tata Power Solar now presented their prototype of a two-seater EV. The SERVe (Solar Electric Road Vehicle) is powered by the sun and weighs only 590 kilos – solar panels included.

CAR POWERED BY SOLAR ENERGY
APRIL 23, 2015
RAFTAR NEWS

कुछ दिनों पहले भारत के लोगों ने से चलने वाले दुनिया के पहले विमान 'सोलर इंप्लस' को देखा. अब जल्द ही भारतीयों के सामने सोलर एनर्जी से चलने वाली पहली स्वदेशी कार होगी. यह कार टाटा पावर और मणिपाल यूनिवर्सिटी के छात्रों द्वारा डिजाइन की गई होगी. इसका शुरुआती मॉडल बुधवार को पेश किया गया.

STUDENTS FROM MANIPAL UNIVERSITY DEVELOPED A SOLAR CAR
APRIL 23, 2015
WORLDLY POST

A team of 27 Students from Manipal Institute University,Karnataka,developed a solar car called SERVe (Solar Electric Road Vehicle) using indigenous technology.

The Tata Power Solar sponsored 25 lakhs for the project,and it took 2 years to design and manufacture it.The two-seater solar car that weighs around 590 Kgs can reach a maximum speed of up to 60Kmph and can run up to 115 kms with single charge.

“We are extremely happy to see how our students have combined their passion for green energy,through the launch of SREVe.Industry-academia collaboration is the key to foster innovation among the student community.Hence working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer.The team looks forward to working with more companies for future projects and continue to nurture student-level innovation” Said Dr.P Giridhar Kini,Associate Director, Manipal University.

The solar panels which were custom made, to fit the car’s curved surface to improve the aerodynamics and performance of the vehicle and the panels weigh about just 35Kgs and provides up to 960 watts power and weighs less than half of the usual panels.

“The car needs very light weight and high efficient modules in a very aerodynamic structure and that services we have provided to them” Said Ashish Khanna,Executive Director and CEO of Tata Solar Power.

And he also said that the car is one of many ventures that were supported by company and he firmly believes that Indian students will act as a key contributor in the progress of the company’s solar industry.

SERVE: SOLAR ELECTRIC ROAD VEHICLE
APRIL 23, 2015
I4C

SolarMobil Manipal is the official solar vehicle project team of Manipal Institute of Technology, Manipal University. After the success of its first project - Freyr1, the team took up the challenge of designing and manufacturing India's first solar powered passenger vehicle. This project was initiated with a goal of developing a cheap, efficient and environment friendly transportation solution. It led to the design & manufacturing of SERVe: Solar Electric Road Vehicle.

Novelty and Usefulness

With rising fuel costs, fast depleting fossil fuel resources & ever increasing toxic pollution levels - a team of budding engineers at Manipal Institute of Technology felt it was time to come up with an alternative transportation solution that was practical, cheap & environmentally friendly. Conventional electrical cars today come with a tag of "green vehicles", however the electricity they utilize is in the end generated from thermal power plants or other such facilities which cause a lot of pollution. On the other hand, most of the solar powered vehicles under development around the world have huge development costs (exceeding crores of rupees) and are mostly single seater vehicles. SERVe on the other hand has a total project cost under 20 lakhs making it one of the cheapest (if not the cheapest) passenger solar car ever developed. It's integrated design philosophy allows it to have a maximum seating capacity of upto 4 passengers with considerable boot space. Unlike conventional electric cars which carry the risk of running out of battery charge at short intervals of time - SERVe offers long driving ranges of upto 250 Km on a full battery charge and at the same time provides the added benefit of being able to charge the battery from a 1KW Solar module.

SERVe is a one of a kind solution that has the potential to revolutionize the automobile industry. It is our way of providing the society - a greener, cleaner & better future.

Description of Innovation

SERVe is a result of our desire of “Imagineering the Future”. SERVe was conceptualized keeping in mind three design philosophies – low weight, high efficiency & aerodynamic body. The idea is simple - the solar modules on the roof of the vehicle trap energy & store it in the on-board battery. This battery can alternatively be charged from the A.C. Mains too. The on board battery drives the motor & other electrical & electronic components which ensures safe & smooth functioning of the car. All this is done at minimal total weight with an ergonomic interior design, aerodynamic body work & highly efficient electrical system.

After numerous iterations on SolidWorks & HyperWorks – the design was analyzed on ANSYS & a 1:10 scale model was put to test in the wind tunnel lab at the MAHE Automobile Workshop. With help of sophisticated equipment & consultation from industry experts, SERVe was manufactured in-house. The car is optimized with an electrical efficiency upwards of 90%. SERVe utilizes custom made, light weight solar panels from Tata Power Solar. The indigenous direct solar drive is a salient feature of the car. SERVe also has a state of the art data acquisition & telemetry system which utilizes CAN Protocol. Data from the Battery Management System, Motor Controller, MPPT Charge Controller & various other sensors are relayed to an interactive display to ensure a safe & informed drive.

SERVe is the epitome of creative thought & hard work of 22 budding engineers.

Applications

The prototype as of today can be run on the road and bears massive scope of application in the future. If taken into mass production, the prototype cost is expected to come down drastically, making it competitively priced in the market. Zeero running costs, minimal maintenance costs and noiseless drive makes SERVe is a brilliant transportation option. SERVe has the ability to revolutionize the automobile industry & start off a new market for solar powered vehicles.

Current Stage

Currently the SERVe project is in its testing stage. The car has been successfully tested to start & run solely on solar power. With over 10 hours of direct solar drive testing & at moderate speeds - this has been a great achievement for the SolarMobil team as it proves the ability of the vehicle to run even after exhaustion of the battery pack. The car has also been tested to run directly on the powerful lithium ion battery pack at relatively higher speeds. The team has been able to log & gather lot of positive data during testing, with few of the highlights being - low rate of current discharge at constant speed of the vehicle, high rate of charging of the battery directly through solar panels and a relatively low turning radius. The main points left to be addressed for the project to reach 100% completion are - final implementation of external bodywork & interior fittings, final system integration & rigorous testing of the vehicle.

Further Research

While SERVe, in its first iteration itself ticks a lot of the right boxes - the team feels there is still scope for improvement to make the car perfect. The team hopes to be able to increase the degree of automation in the vehicle - making it more user friendly & also increasing its functionality. The team also aims at working on a few design changes as suggested through active feedback from faculty, friends & well wishers. One of the greatest limitations in the research, trial & development of SERVe has been the lack of funding. The team has had little room to explore & experiment. The possibility of greater funding excites the team - as there are a lot of system improvements that have been thought of such as - use of two hub motors instead of a motor-chain drive system , thus increasing efficiency & also torque/speed control, etc.

Competitors

Today, there is no commercially available solar passenger vehicle & only handful of institutional teams around the world have developed one. SERVe is the first of its kind in India and has been developed at less than 1/10th the cost of similar vehicles around the world. When compared to electrical vehicles such as Reva - SERVe brings the added advantage of an aesthetic & modern design, greater driving range, lower running & maintenance costs & significantly higher levels of comfort.

Award / Support

SolarMobil Manipal was awarded for its first project Freyr1 on the Manipal University Innovation Day 2012. It was also awarded a grant of Rs. 1 lakh with further support by the Micro, Small & Medium Enterprises (MSME) Dept of the Govt. of India in recognition of the innovation capability of SolarMobil Manipal & SERVe.

STUDENTS OF MANIPAL UNIVERSITY BUILD A SOLAR-POWERED CAR
APRIL 24, 2015
ENTERPRENUER INDIA

By using indigenous technology, Manipal University's students have built a solar- powered car. A team of 27 students particitaped in this project and total of Rs. 25 lakh was invested in building this car. The project was sponsored by Tata Power Solar. The prototype, designed by the university's SolarMobil team, weighs 590 kg.

As per the press released by the Tata Power and Manipal University, the two-seater solar car can reach a maximum speed of up to 60 kmph. The project cost includes the solar modules, which are the car's major components. The prototype took two years to design and manufacture, Jeet Bannerjee, team manager, SolarMobil, said in a press release. The car can run up to 115 km after a single charge.

Ashish Khanna, ED & CEO, Tata Power Solar said that this project epitomises Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. The solar car is one of many ventures which they have supported, and they firmly believe India's students will act as a key contributor in the progress of our solar industry.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
EFY TIMES

Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today - SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

The core members of the student design team SolarMobil, include: Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 23, 2015
SAMAY LIVE

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause."

TATA POWER SOLAR

Global Communications
TEXT100

MANIPAL UNIVERSITY STUDENTS ROLL OUT FIRST SOLAR CAR
APRIL 23, 2015
INOOZ

Students from the SolarMobil team at Manipal Institute of Technology (MIT) unveiled their first prototype solar car, which is targeted at commercial usage. Dubbed as SERVe (Solar Electric Road Vehicle), the solar car is custom-fit with solar panels designed by Tata Solar Power. It is a good example of an industry-academia effort that will help increase the role of solar innovation in green mobility.

MIT is a constituent of Manipal University.

The four-wheeled prototype that runs solely on solar energy is designed by the above team of 27 student enthusiasts. Weighing 590kg, this two-seater solar car can reach up to 60kph with a cruising speed of 30kph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface, enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh just 35kg and provide up to 960W power. They also weigh less than half of the conventional panels.

The car houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

The vehicle's three main design and fabrication components include:

Customised solar panels:
The customised solar panels provided by Tata Power Solar are made of high efficiency monocrystalline solar cells encapsulated with an aluminium backsheet and a light-weight polymer front sheet. These lightweight solar panels are placed along the curved surface of the car's roof, ensuring that the aerodynamics is not compromised.

High-end battery system:
The car's energy density Li-ion battery pack allows a speed of 150km on a full charge. This battery management system monitors the individual strings of the battery pack, ensuring proper health and safety. It is also fitted with a CAN-bus protocol to ensure fast, efficient and error-free communication.

Data acquisition:
The car's data acquisition system uses Rasberry-Pi; this central unit acquires data from the battery management system, maximum power point tracker and various others sensors to ensure proper functioning of all the systems. The data is used to analyse the vehicle's performance.

Speaking on the project, Dr P. Giridhar Kini, associate director at Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe."

The core members of the student design team, SolarMobil, include Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

MANIPAL INSTITUTE & TATA POWER SOLAR UNVEIL SOLAR CAR WITH 60 KMPH TOP SPEED
APRIL 23, 2015
NEWS LOCKER

A team from Manipal Institute of Technology and Tata Power Solar on Wednesday unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with solar panels designed by Tata Power Solar, said a statement.
Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

"We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Manipal University, Associate Director, Dr P Giridhar Kini, Associate Director, Manipal University said.

According to Ashish Khanna, ED & CEO, Tata Power the project epitomizes Tata Power Solar's belief that fostering innovation is the key for the proliferation of solar energy. "We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Khanna.

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 23, 2015
EQ INTERNATIONAL

Tata Power Solar and Manipal University recently unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph. Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.

TATA POWER SOLAR

Global Communications
TEXT100

MANIPAL INSTITUTE & TATA POWER SOLAR UNVEIL SOLAR CAR WITH 60 KMPH TOP SPEED
APRIL 23, 2015
HEADWAY SOLAR

A team from Manipal Institute of Technology and Tata Power Solar on Wednesday unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

This four-wheeled prototype, run solely on solar energy, is designed by a team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with solar panels designed by Tata Power Solar, said a statement.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The customized panels weigh just 35 kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."

Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause."

MANIPAL INSTITUTE OF TECHNOLOGY LAUNCHES ITS FIRST PROTOTYPE SOLAR CAR
APRIL 23, 2015
EDUCATION WORLD

On April 22, Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

This four-wheeled prototype, run solely on solar energy, was designed by the SolarMobil team of 27 student enthusiasts. Weighing 590 kg, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh just 35kg, provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, associate director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomises Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organisation but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry," said Ashish Khanna, ED & CEO, Tata Power Solar.

The core members of the SolarMobil team include Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

Manipal University is synonymous with excellence in higher education. Over 28,000 students from 57 different nations live, learn and play in the sprawling university town nestled on a plateau in Karnataka's Udupi district.

With 25 years of deep domain expertise, Tata Power Solar (TPS)is one of the pioneering solar manufacturers in the world and India's largest specialised EPC player. Founded in 1989, TPS presently boasts a strong national presence with 8 regional offices, 40 authorised service centres and a network of more than 1000 channel partners nationwide.

MANIPAL UNIVERSITY STUDENTS DEVELOP SOLAR-POWERED CAR
APRIL 23, 2014
KONKAN WORLD

SolarMobil, a team of 27 students from Manipal University, has built a futuristic automobile, which runs solely on solar power. The car, named SERVe – Solar Electric Road Vehicle, was unveiled at Tata Power Solar Headquarters on Wednesday.

The car's custom-fit solar panels have been designed and manufactured by Tata Power Solar. The team began working on the project in 2012 with Manipal University as their workspace. "Cars are our passion and we wanted to make a model that is conducive to a green and sustainable environment. Everything is done by us right from cutting to welding," said Jeet Bannerjee, Team Manager, SolarMobil.

Weighing 590 kg, the car hit the maximum speed of 60 kmph. The battery energy storage is 6.5kWh and can sustain up to 150 km when fully charged. The body is Glass Fibre Reinforced Plastic and the suspension has been tested for Indian roads. "The team started everything from the scratch. The students, all from different disciplines, have made practical use of their classroom learning," said Dr P. Giridhar Kini, Associate Director, Manipal University.

The approximate production cost of this car is Rs 25 lakh. Funds were sponsored by companies like Coca-Cola, Agni Motors and Element14. Jeet Bannerjee said that their major challenge was convincing the people about their idea, arranging funds for production and procuring materials for building the car.

"We just provided them with a platform for their passion and innovation. "This is not a business proposition and there are no plans to introduce it in the commercial market yet," said Mr Ashish Khanna, Executive Director and CEO, Tata Power Solar.

"There is no other joy than driving a self-made car with the belief that it will change the world of automobiles through this new drive towards solar technology," Jeet said.

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
SOLAR QUARTER

Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today - SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability. Designed by students of SolarMobil team, with an intention of commercial usage, the vehicle is custom-fit with bespoke solar panels designed by Tata Power Solar. SERVe is the perfect showcase of an industry-academia effort that will help increase the role of solar innovation in green mobility, with an objective of proliferation of eco-vehicles.

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About Manipal University:

Manipal University is synonymous with excellence in higher education. Over 28,000 students from 57 different nations live, learn and play in the sprawling University town, nestled on a plateau in Karnataka's Udupi district. It also has nearly 2500 faculty and almost 10000 other support and service staff, who cater to the various professional institutions in Health Sciences, Engineering, Management, Communication and Humanities.

Every institute has world class facilities and pedagogy, which are constantly reviewed and upgraded to reflect the latest trends and developments in higher education. Some of its premier institutes are the Kasturba Medical College, and the Manipal Institute of Technology.

About SolarMobil Manipal Team:
SolarMobil Manipal is a team of students from various branches of Manipal Institute of Technology. The team's aim is to successfully design, test and build a vehicle powered solely by solar energy, and to showcase it's car across world. The team plans to approach every project with drive, innovation and efficiency as the cornerstones, around which it hopes to build a wealth of experience & knowledge.

The formation of SolarMobil.manipal was initiated in August 2011 and since then, the team has involved themselves in research in the field of "new age" solar arrays, high output "Eco-friendly" batteries and the latest super-efficiency motors. The team consists of students from different fields of technicality – Mechanical, Electrical, Instrumentation, Aeronautical, Automobile and Mechatronics all combining their skills, knowledge and experience to make a car we can truly be proud of.

About Tata Power Solar:
Tata Power Solar (TPS), with 25 years of deep domain expertise, is one of the pioneering solar manufacturers in the world and India's largest specialised EPC player. Founded in 1989, the company was originally formed as a joint venture between Tata Power and British Petroleum Solar (BP Solar). As a pioneer and market leader in the solar space, headquartered in Bangalore, TPS now operates independently as a wholly owned subsidiary of Tata Power. TPS has a strong national presence with 8 regional offices, 40 authorized service centres plus a network of more than 1000 channel partners nationwide.

As one of the largest solar manufacturers in India, TPS operates three world-class manufacturing units in Bangalore, with a production capacity of 200 MW of modules and 180 MW of cells. It has completed more than 160 MW of ground-mount utility scale and 40 MW of rooftop and distributed generation projects across the country as of FY14. It also offers a diverse line of solar products for both urban and rural markets – these include water heaters, home lighting, street lighting, power packs, and water pumps among others. TPS is committed to enabling solar everywhere and aims to provide energy access to millions of people across the country via its integrated solar solutions.

'SERVE' - SOLAR ELECTRIC ROAD VEHICLE, PROTOTYPE CAR BY MANIPAL STUDENTS
APRIL 23, 2015
MANGALORE TODAY

Manipal Institute of Technology students designed the institute's first prototype of a solar-powered car called the 'SERVe' (Solar Electric Road Vehicle) and are exploring the possibility of its commercial production. Tata Power Solar, the country's largest integrated solar stake holder contributed to the effort and rendered assistance for this student project. Designed by a team of 27 students who called the 'Solar Mobil team. The four-wheeled, two-seater solar vehicle weighs 590 kg and can reach a speed upto 60 Km/h with a cruising speed of 30 Km/h.

The solar panels are custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh 35kg and provide up to 960 watts power and weigh less than half of the conventional panels. It also houses a direct solar drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system, a release from the institute stated.

Dr P Giridhar Kini, Associate Director, Manipal University stated that the institution is happy to see how the students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped students get better technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovations.

Ashish Khanna, ED & CEO, Tata Power Solar said, "We are glad to be part of the project driven by a talented student-team. The solar car is one of the many ventures which we have supported, and we firmly believe India's students will act as a key contributors in the progress of the Indian solar industry."

TATA POWER SOLAR, MANIPAL VARSITY UNVEIL SOLAR CAR PROTOTYPE
APRIL 23, 2015
CLEAN ENERGY INFO

Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

Designed by 27-students of Manipal's SolarMobil team for commercial use, the 590-kg car operates on technical support provided by the company.

The two-seater is custom-fit with solar panels sourced from Tata Power Solar. The panels weigh 35 kg and provide up to 960 watts of power. The car also houses a direct solar drive to maintain the 30 kmph cruising speed.

Speaking on the project, P Giridhar Kini, associate director, Manipal University, said, "the industry-academia collaboration is the key to foster innovation among the students. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer."
Tata Power Solar managing director and chief executive Ashish Khanna chipped in saying "the project epitomises our belief in innovation. We not only encourage innovation within our organisation but also propagate university participation for this cause.

TATA POWER SOLAR

Global Communications
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MANIPAL STUDENTS DEVELOP PROTOTYPE OF SOLAR-POWERED CAR
APRIL 23, 2015
KEMMANNU

Students of Manipal Institute of Technology have designed the institute's first ever prototype of a solar-powered car called the SERVe (Solar Electric Road Vehicle) and are exploring the possibility of its commercial production.

Tata Power Solar, the country's largest integrated solar player in its effort, rendered its assistance for the student project. Designed by a a team of 27 students who call themselves the SolarMobil team, this four-wheeled, two-seater solar vehicle weighs 590 kg and can reach a speed upto 60 kmph with a cruising speed of 30 Kmph.

The solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customised panels weigh 35kg and provide up to 960 watts power and weigh less than half of the conventional panels. It also houses a direct solar drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system, a release from the institute stated.

"We are happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," said Dr P Giridhar Kini, Associate Director, Manipal University.

"We are pleased to be part of the project driven by a talented student-team. The solar car is one of the many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.

TATA POWER SOLAR

Global Communications
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ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 23, 2015
PROJECT REPORTER

Tata Power Solar, India's largest integrated solar player and Manipal Institute of Technology, India's leading technology institute, which is a constituent of Manipal University, unveiled today - SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

Manipal University & Tata Power Solar unveil SERVe, a solar car prototype aimed at commercial usage, by Team SolarMobil

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This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.
The core members of the student design team SolarMobil, include: Anudeep Reddy, Jeet Bannerjee, Siva Bhushan Reddy, Anjan Kumar, Varun Gupta, Rohan Sahdev, Madhav Lakhotia, Samay Goenka, Sulekh.P, Akshat Singh, Amol Grover and Nikhil Gumidelli.

About Manipal University:

Manipal University is synonymous with excellence in higher education. Over 28,000 students from 57 different nations live, learn and play in the sprawling University town, nestled on a plateau in Karnataka's Udupi district. It also has nearly 2500 faculty and almost 10000 other support and service staff, who cater to the various professional institutions in Health Sciences, Engineering, Management, Communication and Humanities.

Every institute has world class facilities and pedagogy, which are constantly reviewed and upgraded to reflect the latest trends and developments in higher education. Some of its premier institutes are the Kasturba Medical College, and the Manipal Institute of Technology.

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SolarMobil Manipal is a team of students from various branches of Manipal Institute of Technology. The team's aim is to successfully design, test and build a vehicle powered solely by solar energy, and to showcase it's car across world. The team plans to approach every project with drive, innovation and efficiency as the cornerstones, around which it hopes to build a wealth of experience & knowledge.
The formation of SolarMobil.manipal was initiated in August 2011 and since then, the team has involved themselves in research in the field of "new age" solar arrays, high output "Eco-friendly" batteries and the latest super-efficiency motors. The team consists of students from different fields of technicality – Mechanical, Electrical, Instrumentation, Aeronautical, Automobile and Mechatronics all combining their skills, knowledge and experience to make a car we can truly be proud of.

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Tata Power Solar (TPS), with 25 years of deep domain expertise, is one of the pioneering solar manufacturers in the world and India's largest specialized EPC player. Founded in 1989, the company was originally formed as a joint venture between Tata Power and British Petroleum Solar (BP Solar). As a pioneer and market leader in the solar space, headquartered in Bangalore, TPS now operates independently as a wholly owned subsidiary of Tata Power. TPS has a strong national presence with 8 regional offices, 40 authorized service centres plus a network of more than 1000 channel partners nationwide.

As one of the largest solar manufacturers in India, TPS operates three world-class manufacturing units in Bangalore, with a production capacity of 200 MW of modules and 180 MW of cells. It has completed more than 160 MW of ground-mount utility scale and 40 MW of rooftop and distributed generation projects across the country as of FY14. It also offers a diverse line of solar products for both urban and rural markets – these include water heaters, home lighting, street lighting, power packs, and water pumps among others. TPS is committed to enabling solar everywhere and aims to provide energy access to millions of people across the country via its integrated solar solutions.

TATA POWER SOLAR

Global Communications
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ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 24, 2015
SOLAR TODAY

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This four-wheeled prototype, run solely on solar energy, is designed by the above team of 27 student enthusiasts. Weighing 590 kgs, this two-seater solar car can reach up to 60 kmph with a cruising speed of 30 Kmph.

Designed keeping in mind the mobility and commercial viability, the solar panels have been custom-made to fit the car's curved surface enhancing the aerodynamics and performance of the vehicle. The highly efficient customized panels weigh just 35kgs and provide upto 960 watts power and weigh less than half of the conventional panels. The car also houses a Direct Solar Drive, powered by solar panels, to maintain the cruising speed and is supplemented by extra power from its high-end energy storage system.

Speaking on the project, Dr P Giridhar Kini, Associate Director, Manipal University said, "We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation."

"We are pleased to be part this project driven by a talented student-team. This project epitomizes Tata Power Solar's belief that fostering innovation is key for the proliferation of solar energy. We not only encourage innovation within our organization but also propagate universities participation for this cause, since they can play an important role in driving innovation in partnership with the industry. The solar car is one of many ventures which we have supported, and we firmly believe India's students will act as a key contributor in the progress of our solar industry." said Ashish Khanna, ED & CEO, Tata Power Solar.
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TEXT100

ACCELERATING SOLAR INNOVATION THROUGH INDUSTRY-ACADEMIA PARTNERSHIP
APRIL 24, 2015
CONSTRUCTION UPDATE

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MANIPAL UNIVERSITY AND TATA POWER SOLAR UNVEIL SOLAR CAR PROTOTYPE
APRIL 26, 2015
AUTO CAR

Tata Power Solar and Manipal University have unveiled the SERVe (Solar Electric Road Vehicle) prototype in Bangalore. The prototype – built by a team of 27 students from the university in collaboration with Tata Power Solar – aims to explore commercial viability for solar powered cars.

The solar car prototype is built on a tubular spaceframe chassis with a glass fibre reinforced body and gets bespoke solar panels made by Tata Power Solar along with a complex data management system. The four-wheeled prototype weighs in at around 590kg and gets a two-seat layout.

The prototype is powered by a chain-drive electric motor and gets a Direct Solar Drive, allowing the prototype to run on direct sunlight alone. The solar panel is supplemented by rechargeable lithium-ion cells for additional power, allowing the car a claimed top speed of around 60kph and a claimed cruising speed of 30kph maintainable on Direct Solar Drive.

SERVe becomes the showcase of an industry-academia effort that aims to help increase the role of solar power technology in all-electric and hybrid vehicles.

MANIPAL UNIVERSITY AND TATA POWER SOLAR UNVEIL SOLAR CAR PROTOTYPE
APRIL 26, 2015
TECH TELLING

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CAR SHOPEE.COM

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APRIL 26, 2015
BRUNCH NEWS

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SOLAR CAR UNVEILED BY MANIPAL UNIVERSITY & TATA POWER SOLAR
APRIL 26, 2015
TELEZKOPE

Manipal University and Tata Power Solar has revealed their prototype called the SERVe (Solar Electric Road Vehicle) which has been developed for commercial viability. The future of mobility will not rely on fossil fuel powered vehicles. Instead, electric and other alternative sources of energies are going to power most of the different kinds of vehicles all over the world

TATA POWER AND MIT STUDENTS DEVELOP SOLAR CAR WITH 60 KMPH TOP SPEED
APRIL 26, 2015
RUSH LANE

SERVe (Solar Electric Road Vehicle) is the brainchild of students from Manipal University. It receives solar panels designed by Tata Power Solar.

This two seater solar car prototype weighs a total of 590 kgs, and has a top speed of 60 kmph on solar power alone. When using electric power, the car can reach 120 kmph. On solar power, it has a cruising speed of 30 kmph. The custom fit solar panels weigh 35 kgs and offers 960 watt power. Special Direct Solar Drive is also evident on the prototype so as to maintain cruising speed supplemented by added power from its energy storage system.

SERVe's three main design and fabrication components include customized solar panels, a high end battery system and data acquisition. While the light weight solar panels made of a combination of aluminium and polymer for back and front sheet is placed on the hood of the car, the cars Li-ion battery pack allows 250 km on full charge. It is also fitted with CAN-bus protocol allowing for fast, efficient and accurate communication. For Data acquisition, SERVe uses a Rasberry-Pi central unit which is used to analyse vehicle performance.

SERVe has been designed and produced at a total cost of INR 20 lakhs thus making it one of the cheapest solar cars ever developed. SERVe, the first of its kind in India, is produced at less than 1/10th of the cost of similar vehicles. It is produced due to the hard work of 27 budding engineers is a way of offering the society a greener, cleaner and better future. When comparing the SERVe to Mahindra Reva, better driving range, lower running and maintenance costs and higher levels of comforts were reported.

SOLAR CAR UNVEILED BY MANIPAL UNIVERSITY & TATA POWER SOLAR
APRIL 26, 2015
MOTOR BEAM

Manipal University and Tata Power Solar has revealed their prototype called the SERVe (Solar Electric Road Vehicle) which has been developed for commercial viability.

The future of mobility will not rely on fossil fuel powered vehicles. Instead, electric and other alternative sources of energies are going to power most of the different kinds of vehicles all over the world in a few decades. Taking a big step towards such a future, a team from the Manipal Institute of Technology and Tata Power Solar has unveiled SERVe (Solar Electric Road Vehicle), which is the university's first ever solar car prototype that is ready to explore commercial viability.

The prototype car which runs solely on solar energy is designed by a team of 27 enthusiastic students. Weighing in at just 590 kgs, the solar prototype is capable of reaching a top speed of 60 km/hr and can comfortably cruise at 30 km/hr. Basically designed by students of the SolarMobil team for commercial usage, the car has custom-fit panels that are designed by Tata Power Solar. All the vehicle's solar panels are made to fit the car's curved surface, thereby enhancing the aerodynamics and performance of the vehicle. The panels weigh just 35 kgs and can provide upto 960 watts power and weighs less than half that of conventional solar panels. The vehicle also features Direct Solar Drive, which is powered by solar panels to maintain the cruising speed and this is also supplemented by extra power from its high-end energy storage system.

Manipal University is very happy to have launched such a vehicle and feels that working with companies like Tata Power Solar will only help its students gain technical knowledge and knowledge transfer practically. The team of university students is looking forward to many such future projects for nurturing student-level innovation among the student community. While talking about Tata Power, the company believes that fostering innovation is the key to the proliferation for the future of the solar industry.

MANIPAL UNIVERSITY STUDENTS BUILT SOLAR POWER CAR NAMED 'SERVE'
APRIL 26, 2015
WHAT'S MOVING INDIA

Tata Power Solar, India's largest integrated solar player, and Manipal Institute of Technology today unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car..

The car was built at an investment of Rs. 25 lakh.. A team of 27 students participated in the project.. The team spent two years in designing and developing this SERVe..

This two-seater, four-wheeled prototype, run solely on solar energy, weighs 590kg, can reach up to 60kph with a cruising speed of 30kph..

"Cars are our passion and we wanted to make a model that is conducive to a green and sustainable environment. Everything is done by us right from cutting to welding," said Jeet Bannerjee, leader of the team of students

"We are extremely happy to see how our students have combined their passion for green energy, through the launch of SERVe. Industry-academia collaboration is the key to foster innovation among the student community. Hence, working with corporates like Tata Power Solar helped our students get technical support and knowledge transfer. The team looks forward to working with more companies for future projects and to continue to nurture student-level innovation," Dr P Giridhar Kini, Associate Director, Manipal University said

"We just provided them with a platform for their passion and innovation. "This is not a business proposition and there are no plans to introduce it in the commercial market yet," said Mr Ashish Khanna, Executive Director and CEO, Tata Power Solar

TATA POWER UNVEILS SOLAR CAR PROTOTYPE JOINTLY WITH MANIPAL INSTITUTE
APRIL 27, 2015
INDIAN BUSINESS REVIEW

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TATA POWER SOLAR

Global Communications
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APRIL 27, 2015
MICHELIN CHALLENGE BIBENDUM COMMUNITY

SERVe (Solar Electric Road Vehicle) is the brainchild of students from Manipal University. This two seater solar car prototype weighs a total of 590 kgs, has a top speed of 60 kmph onsolar power alone and a cruising speed of 30 kmph. When using electric power, the car can reach 120 kmph. The custom fit solar panels weigh 35 kgs and offers 960 watt power. Special Direct Solar Drive is also evident on the prototype so as to maintain cruising speed supplemented by added power from its energy storage system.

SERVe's three main design and fabrication components include customized solar panels, a high end battery system and data acquisition. While the light weight solar panels made of a combination of aluminium and polymer for back and front sheet is placed on the hood of the car, the cars Li-ion battery pack allows 250 km on full charge. It is also fitted with CAN-bus protocol allowing for fast, efficient and accurate communication. For Data acquisition, SERVe uses a Rasberry-Pi central unit which is used to analyse vehicle performance.

SERVe has been designed and produced at a total cost of INR 20 lakhs thus making it one of the cheapest solar cars ever developed. SERVe, the first of its kind in India, is produced at less than 1/10th of the cost of similar vehicles. It is produced due to the hard work of 27 budding engineers is a way of offering the society a greener, cleaner and better future. When comparing the SERVe to Mahindra Reva, better driving range, lower running and maintenance costs and higher levels of comforts were reported.

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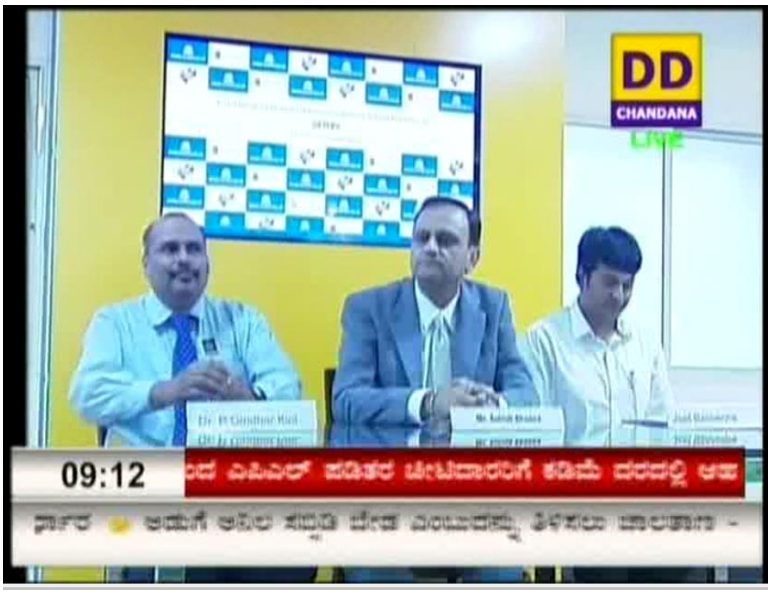

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A team from Manipal Institute of Technology and Tata Power Solar on Wednesday unveiled SERVe (Solar Electric Road Vehicle), the university's first prototype solar car ready for exploring commercial viability.

This four-wheeled prototype, run solely on solar energy, is designed by a team of 27 student enthusiasts. http://ow.ly/LX96a

Manipal Institute & Tata Power Solar unveil solar car with 60 kmph top speed - The Economic Times

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The car's custom-fit solar panels have been designed and manufactured by Tata Power Solar

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Tata Power Solar and Manipal University today unveiled a prototype of a solar electric car which can hit the top speed of 60 kmph.

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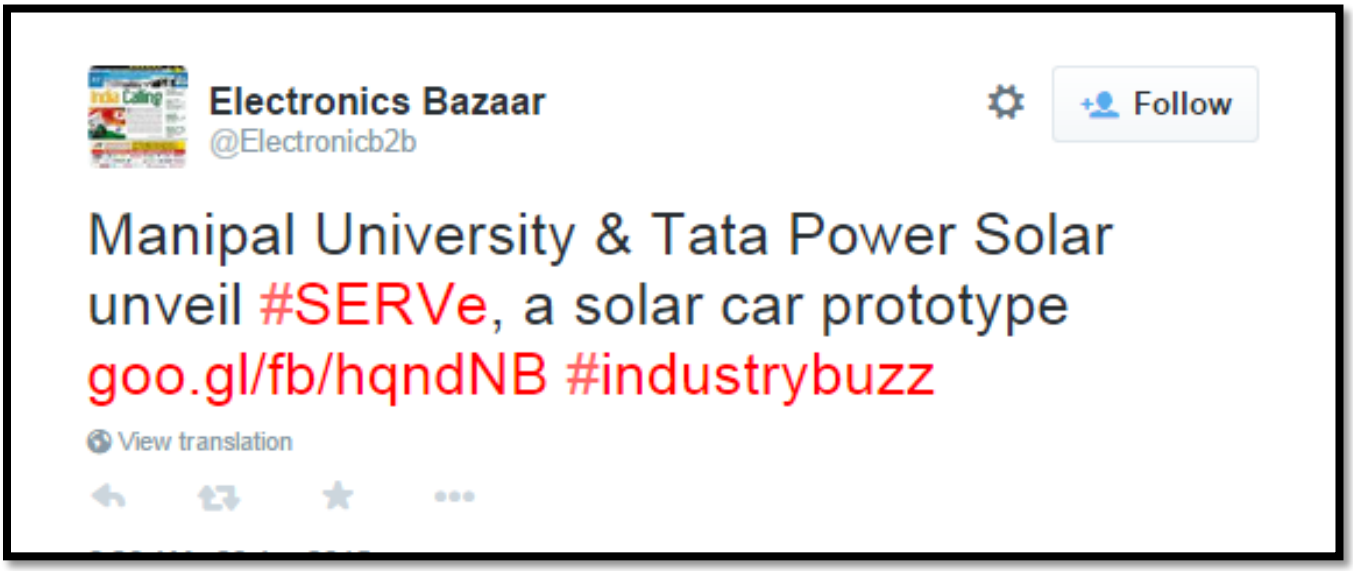

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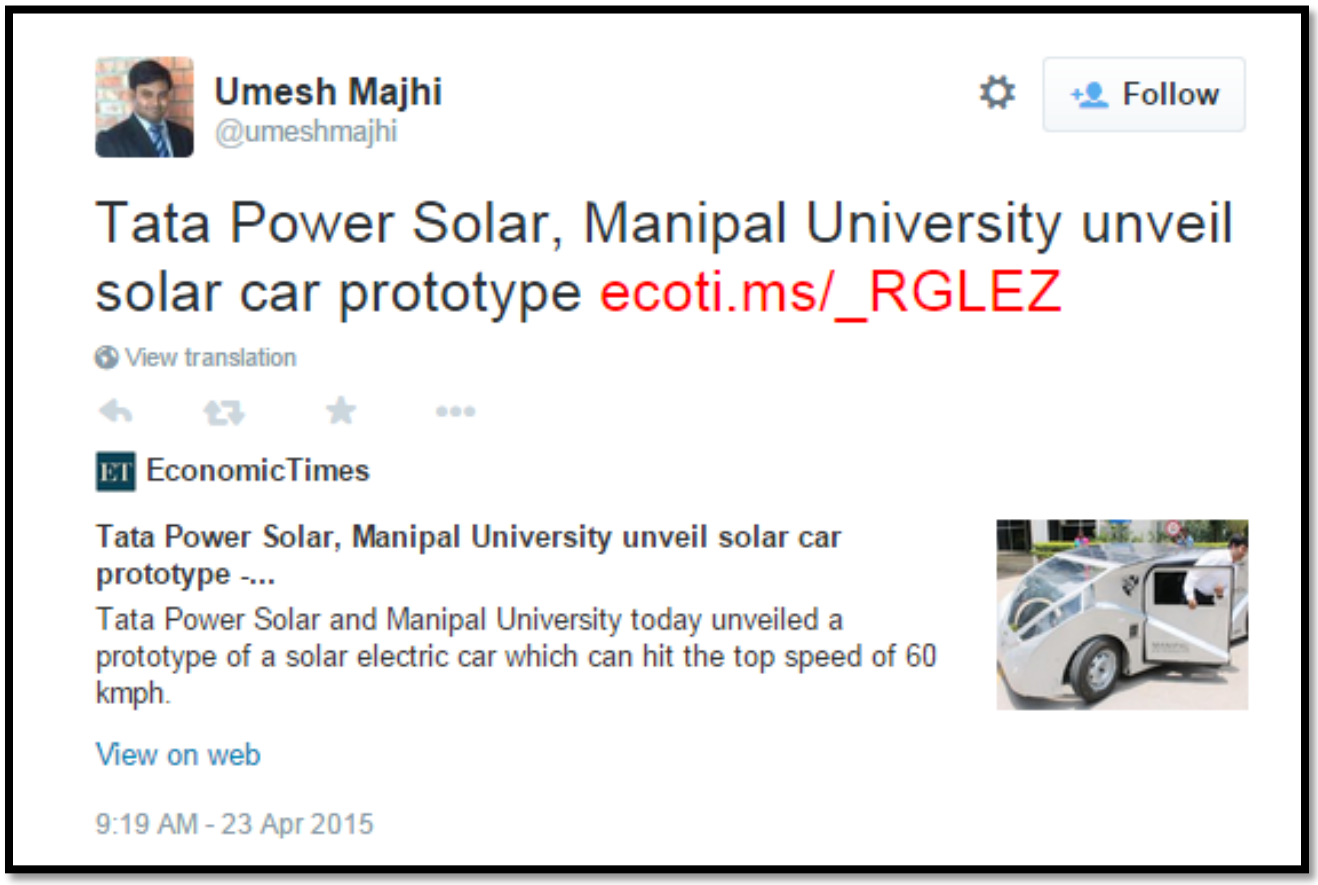

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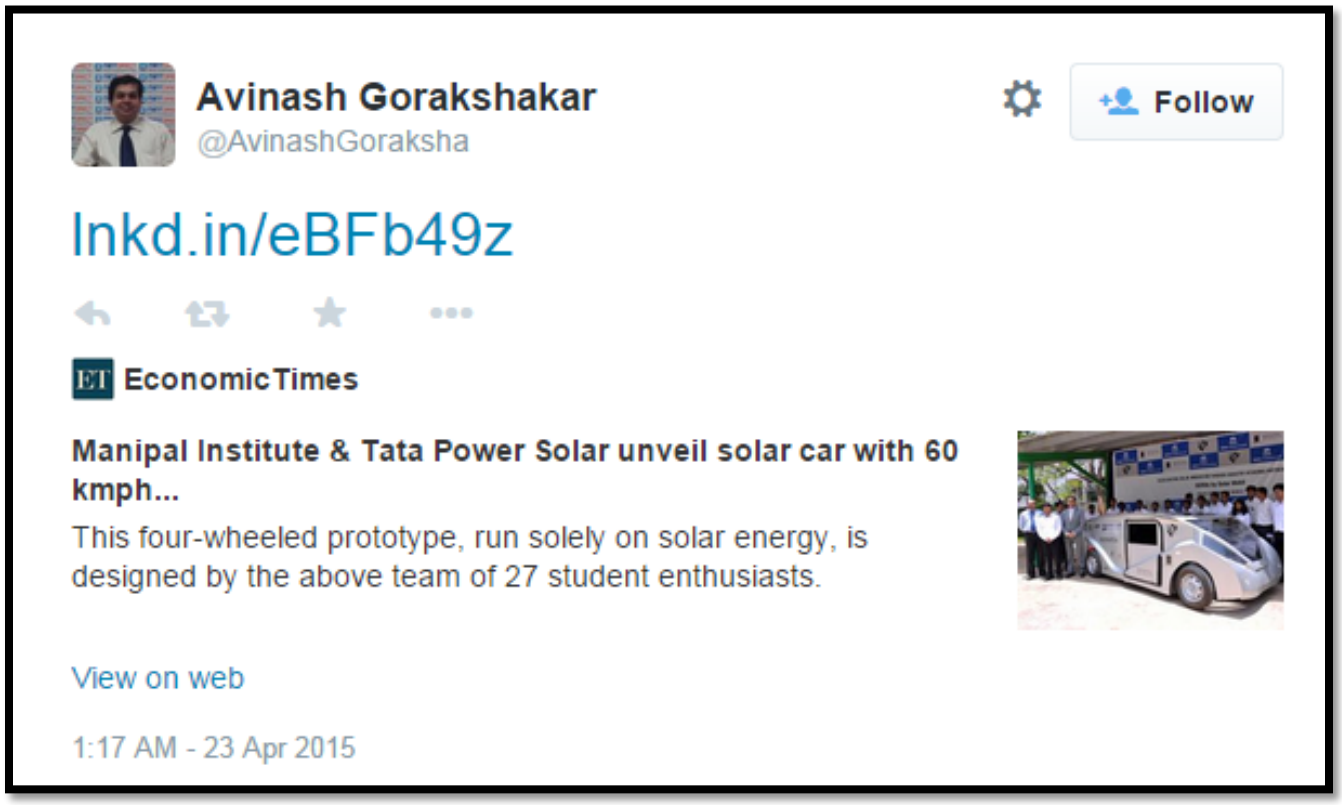

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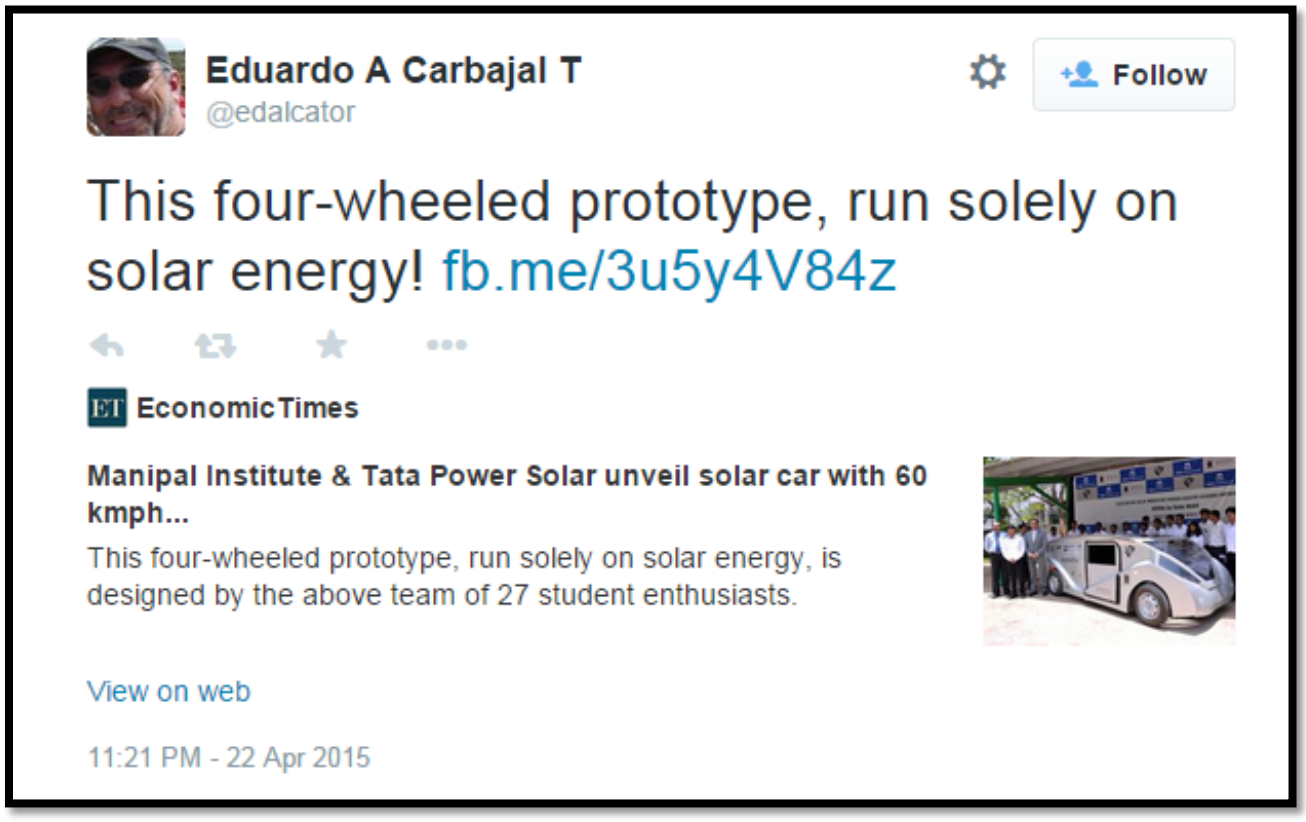

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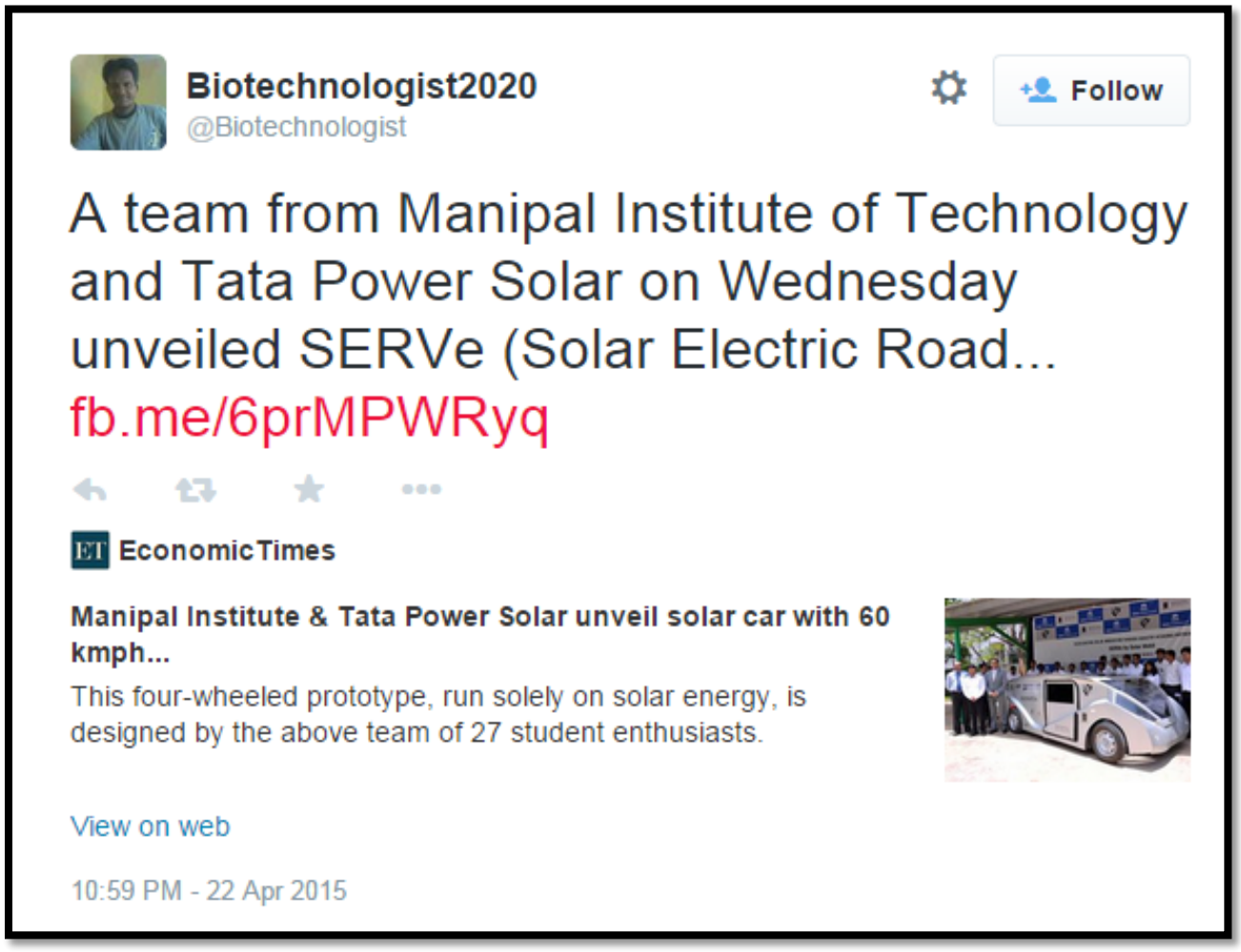

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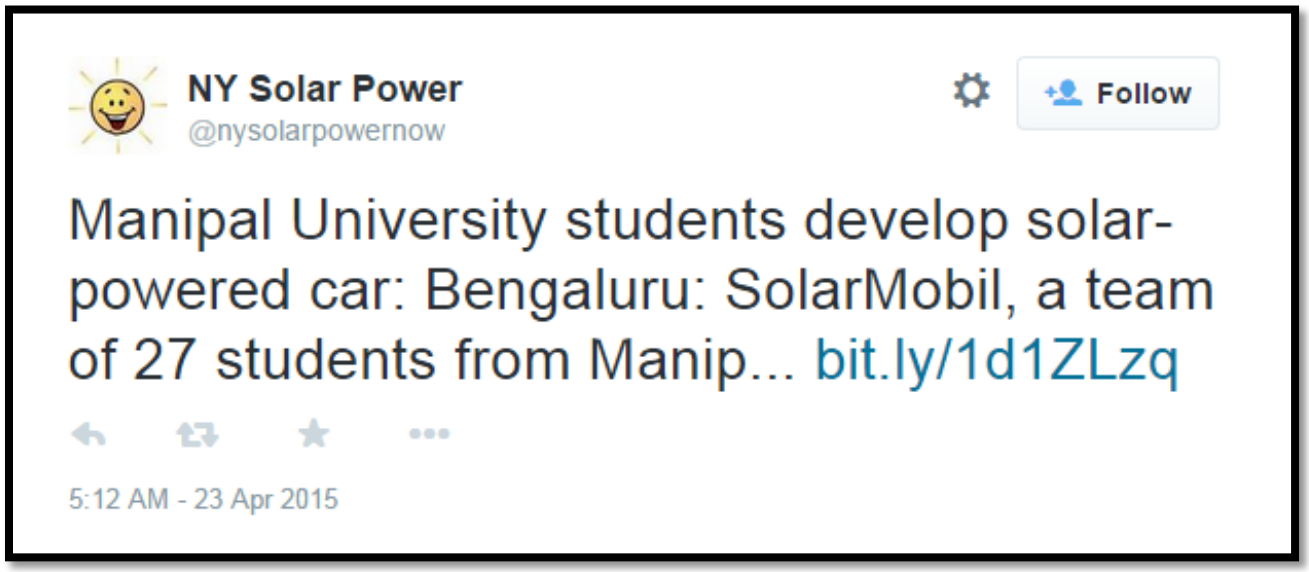

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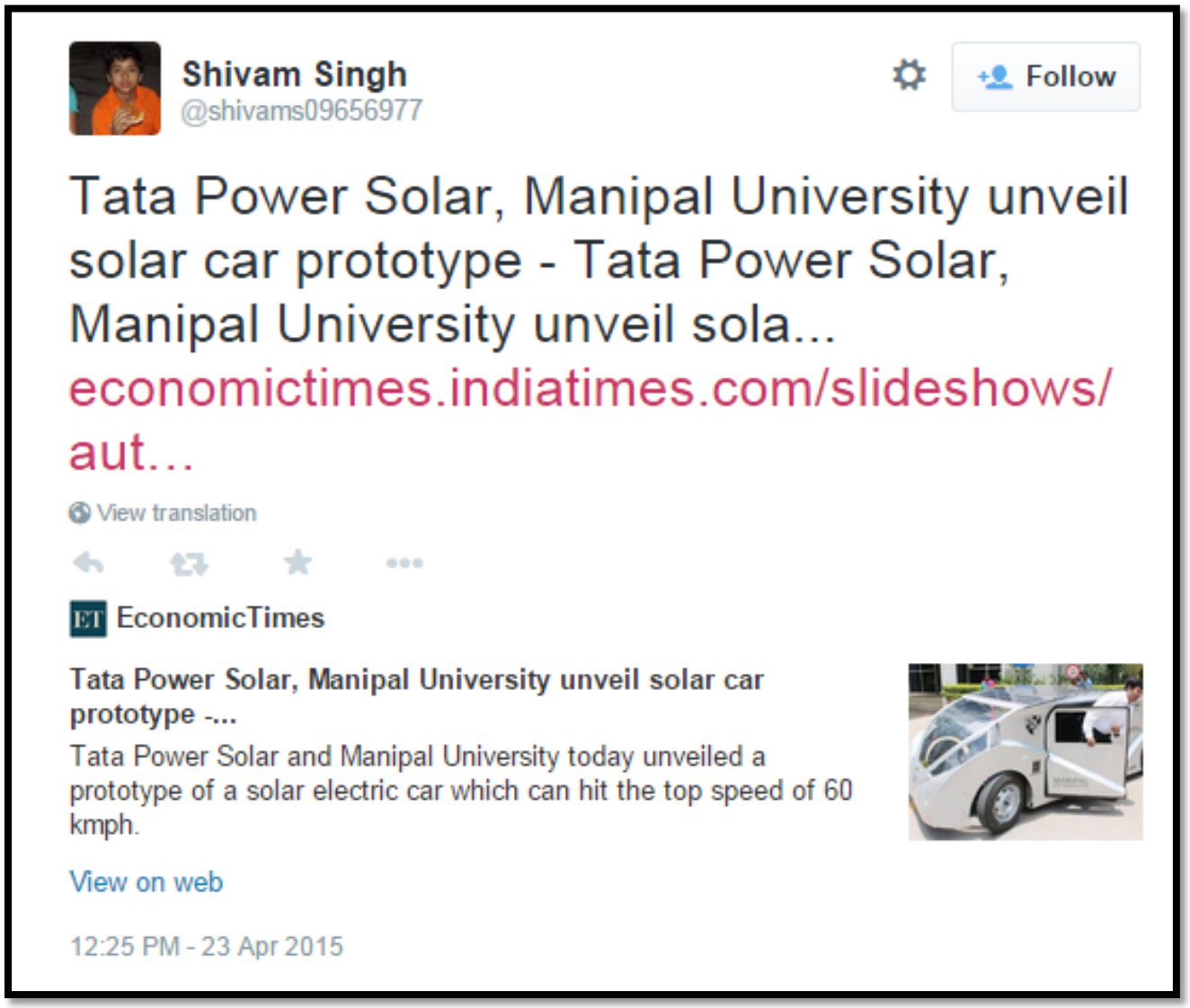

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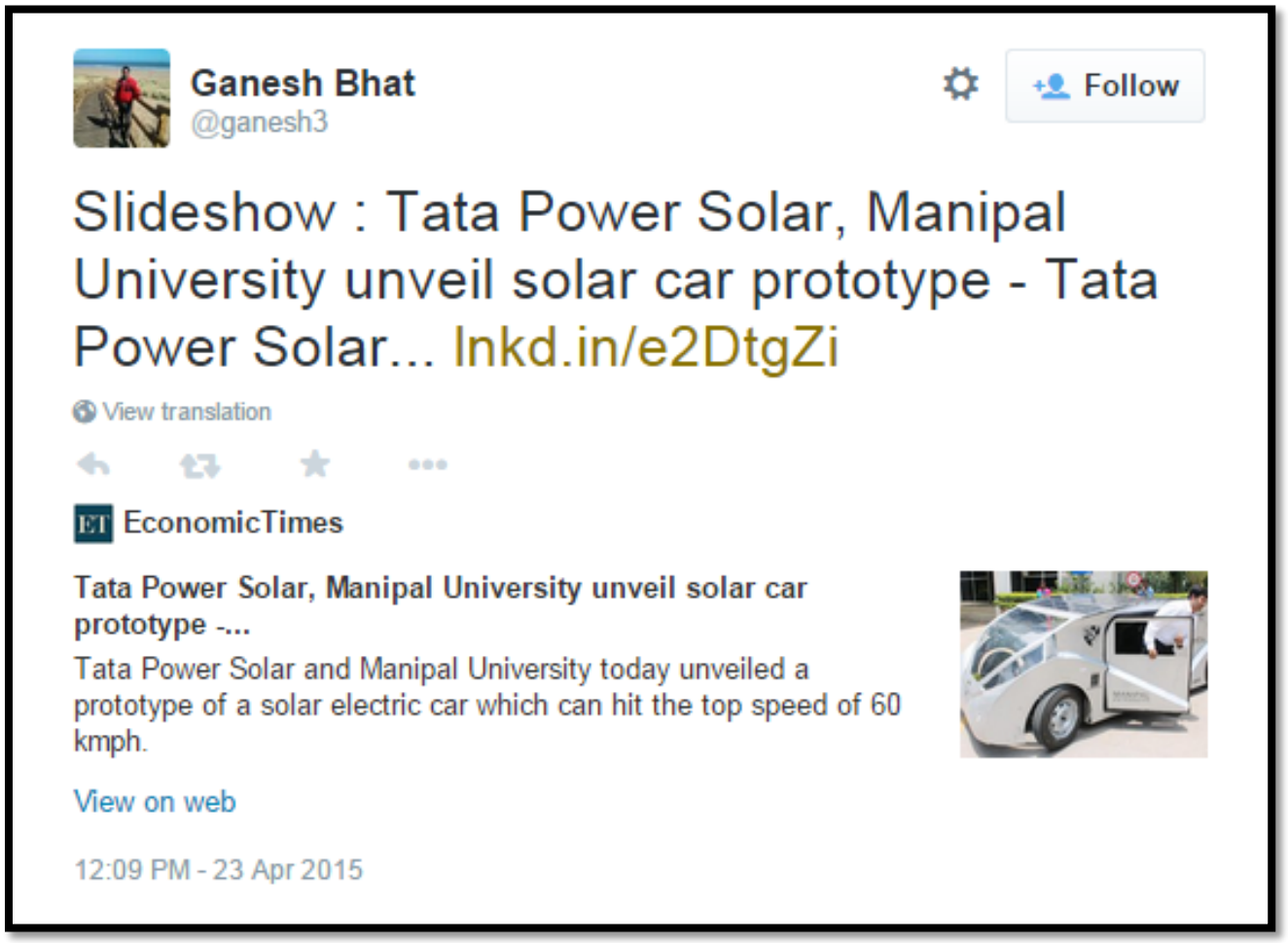

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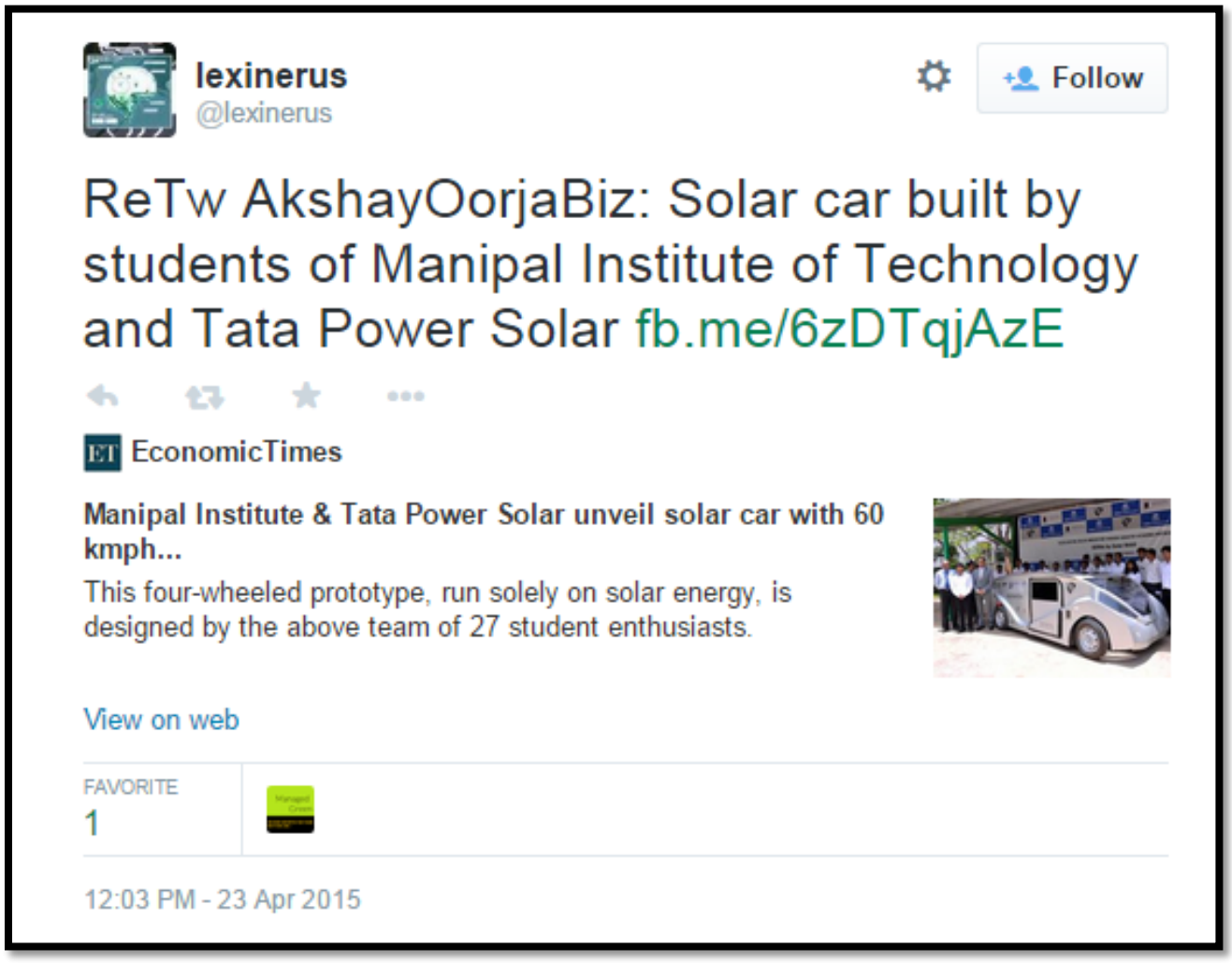

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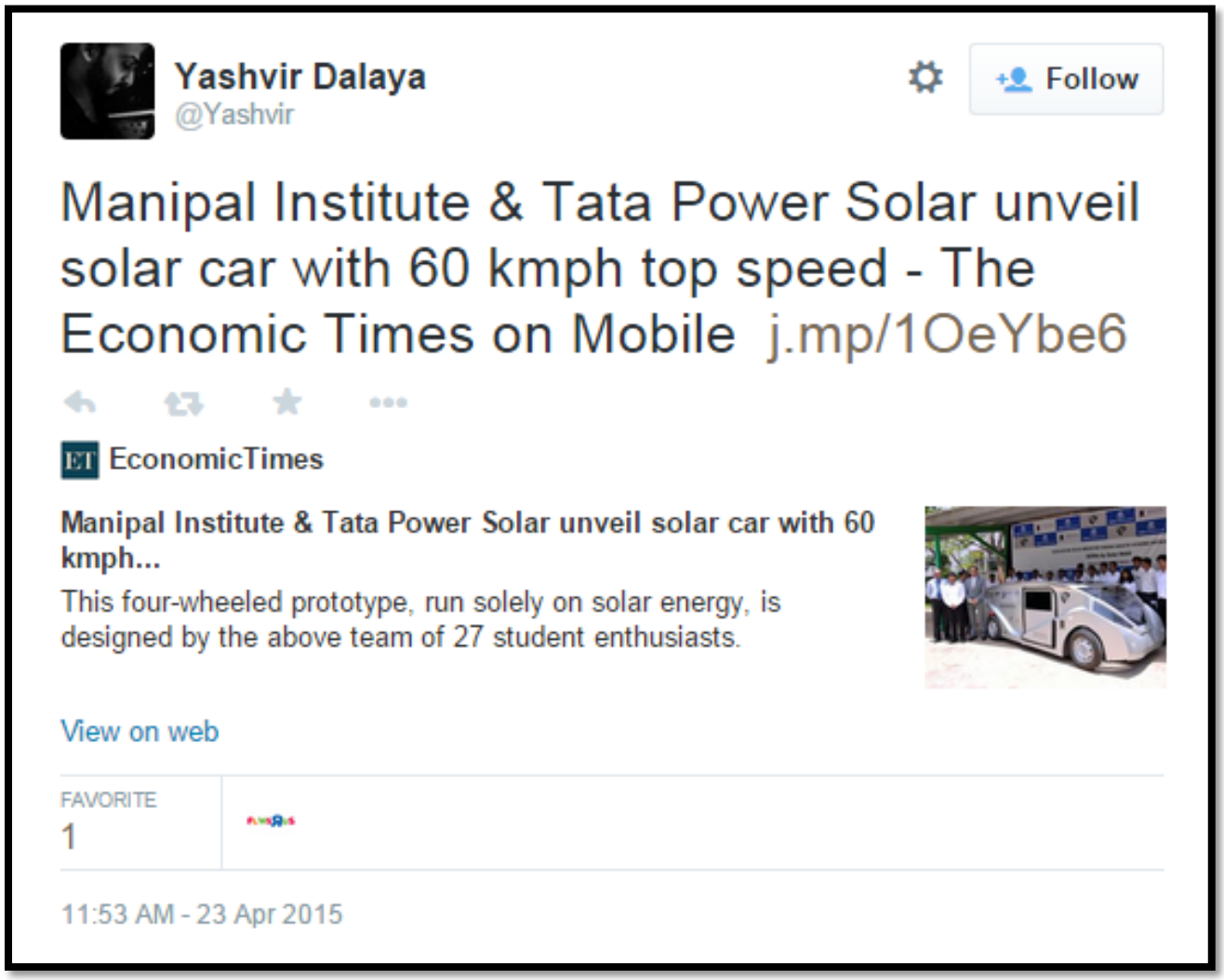

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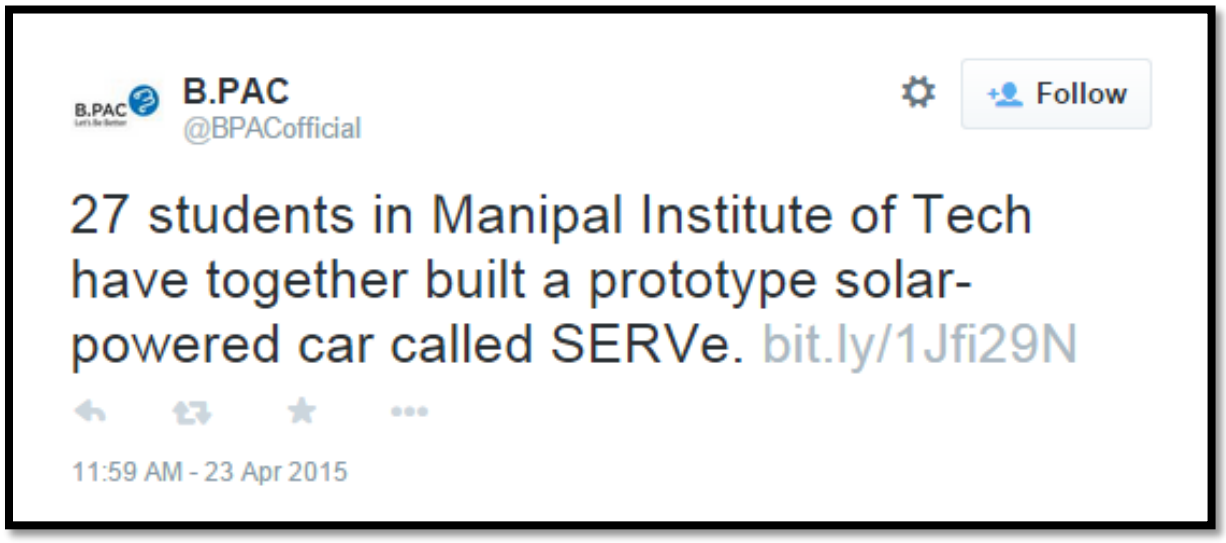

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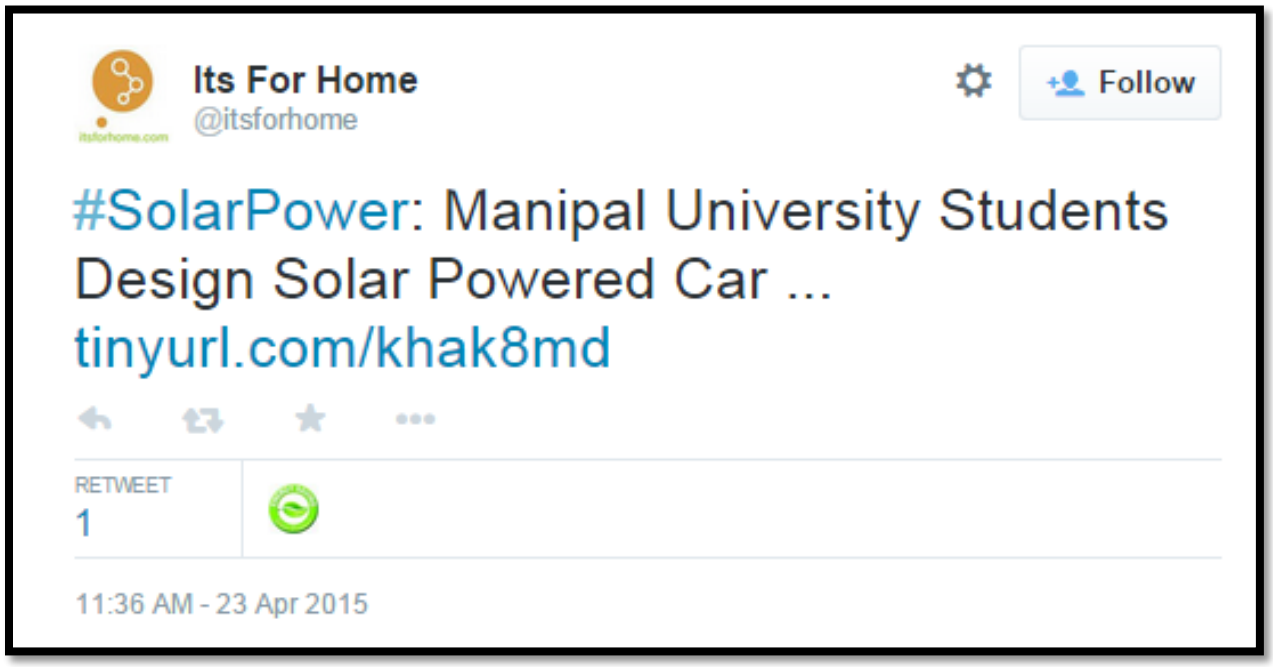

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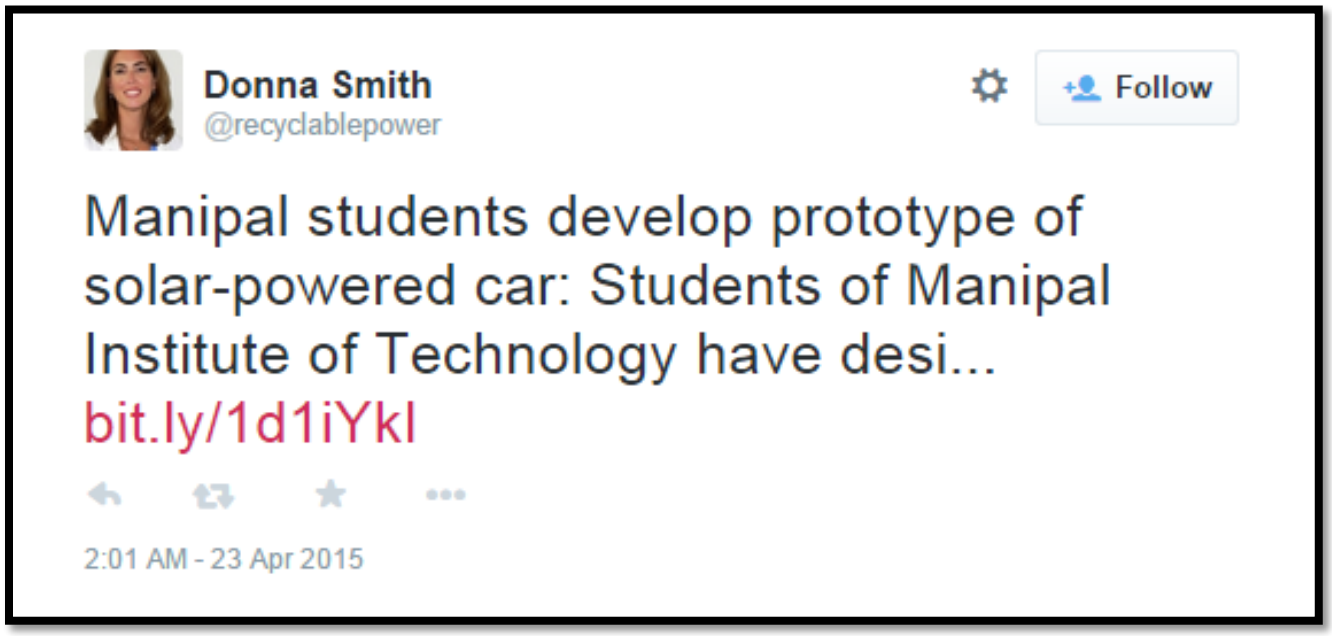

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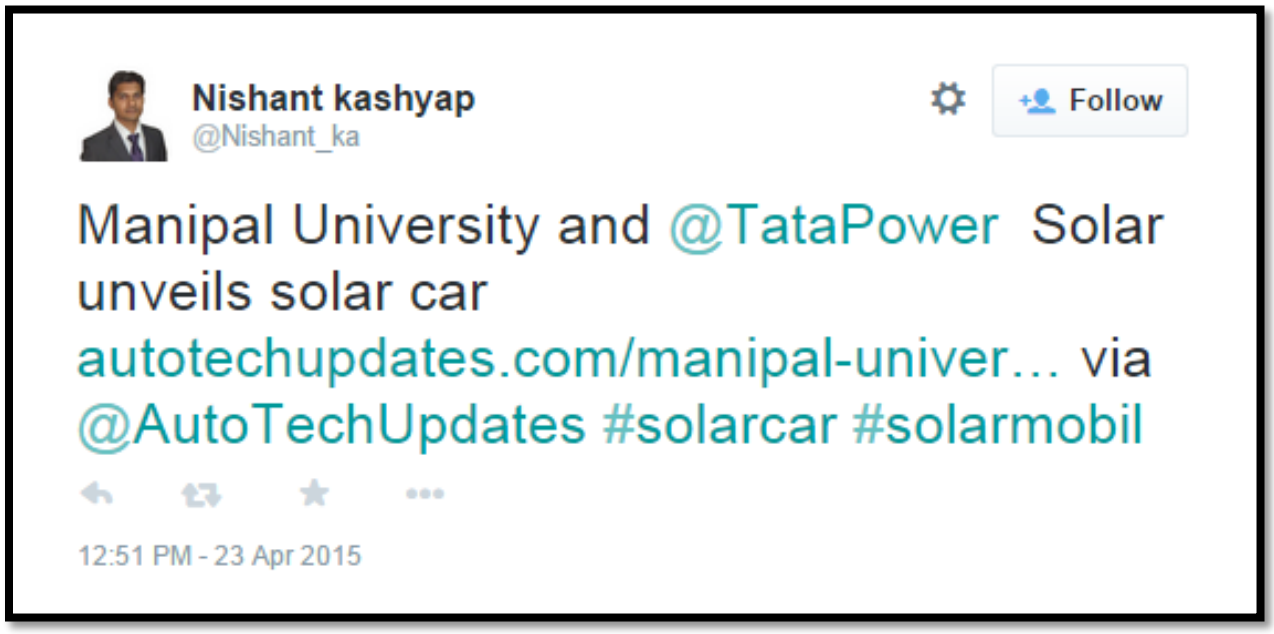

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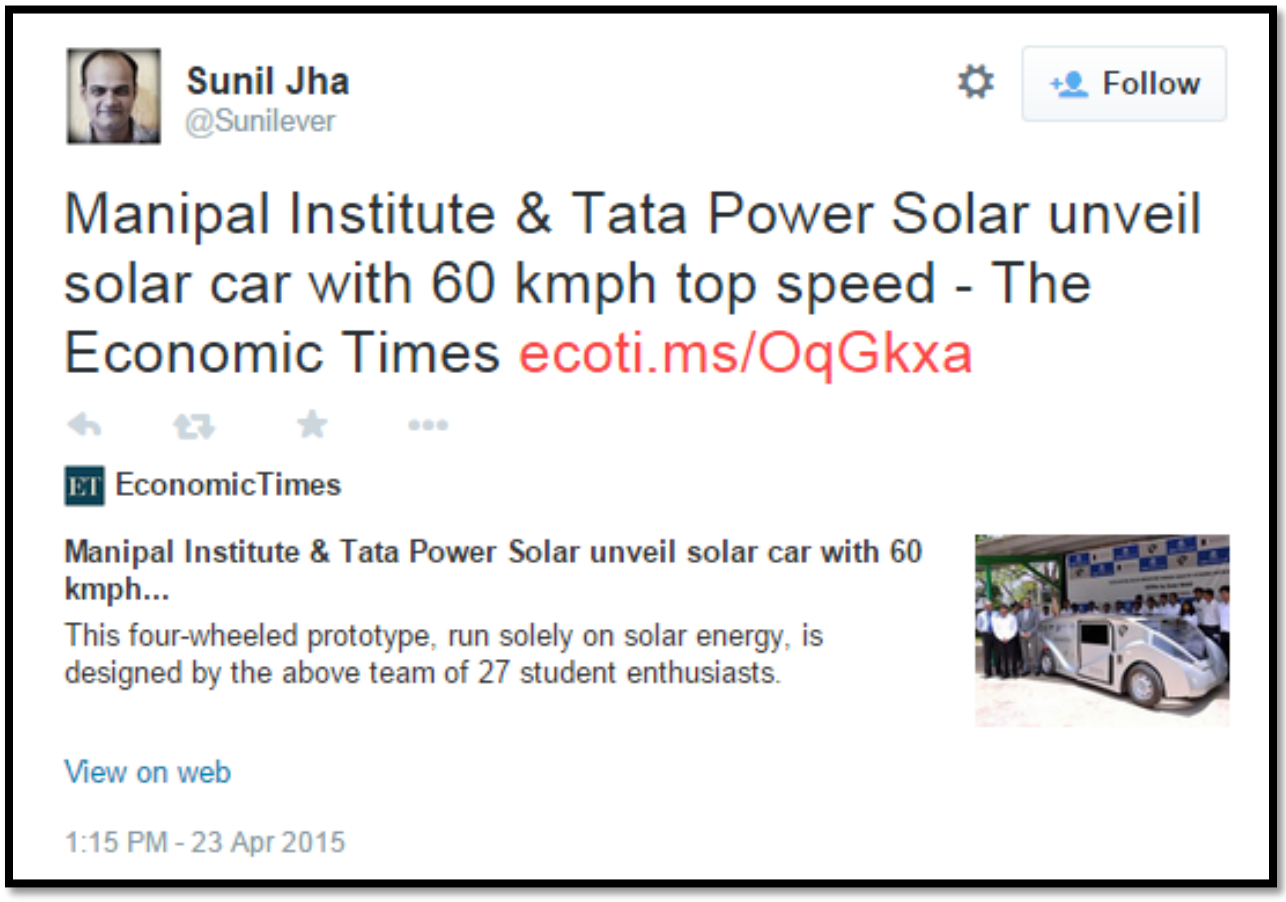

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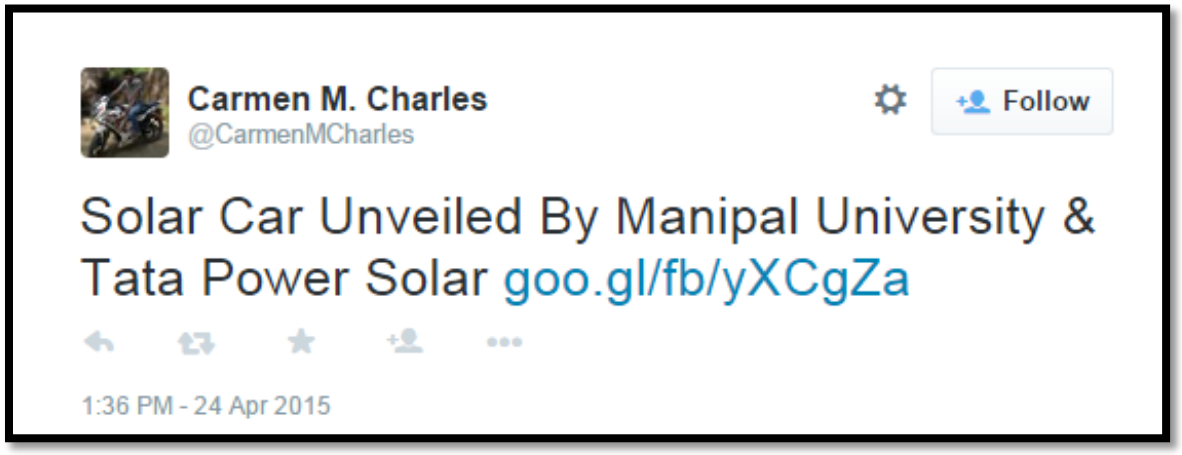

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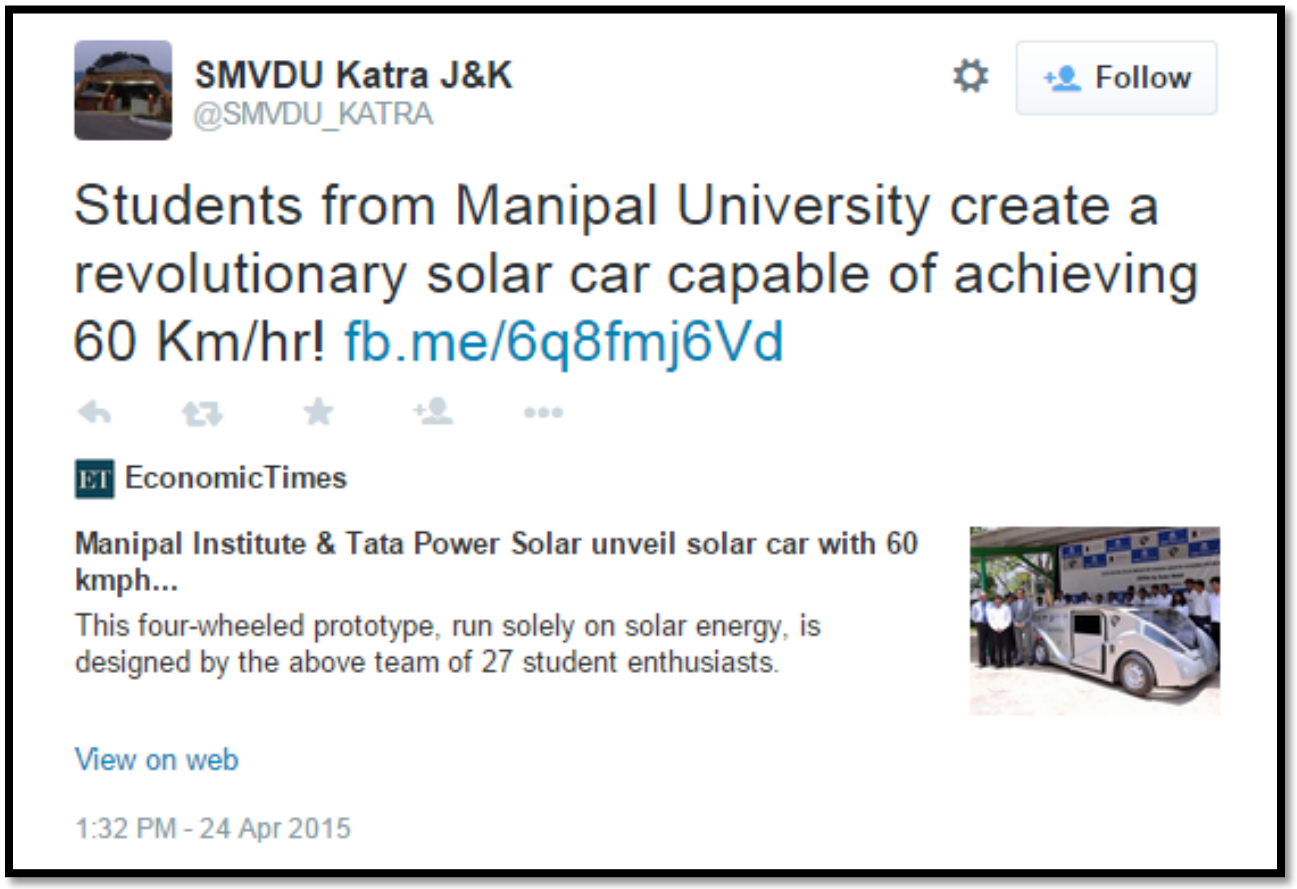

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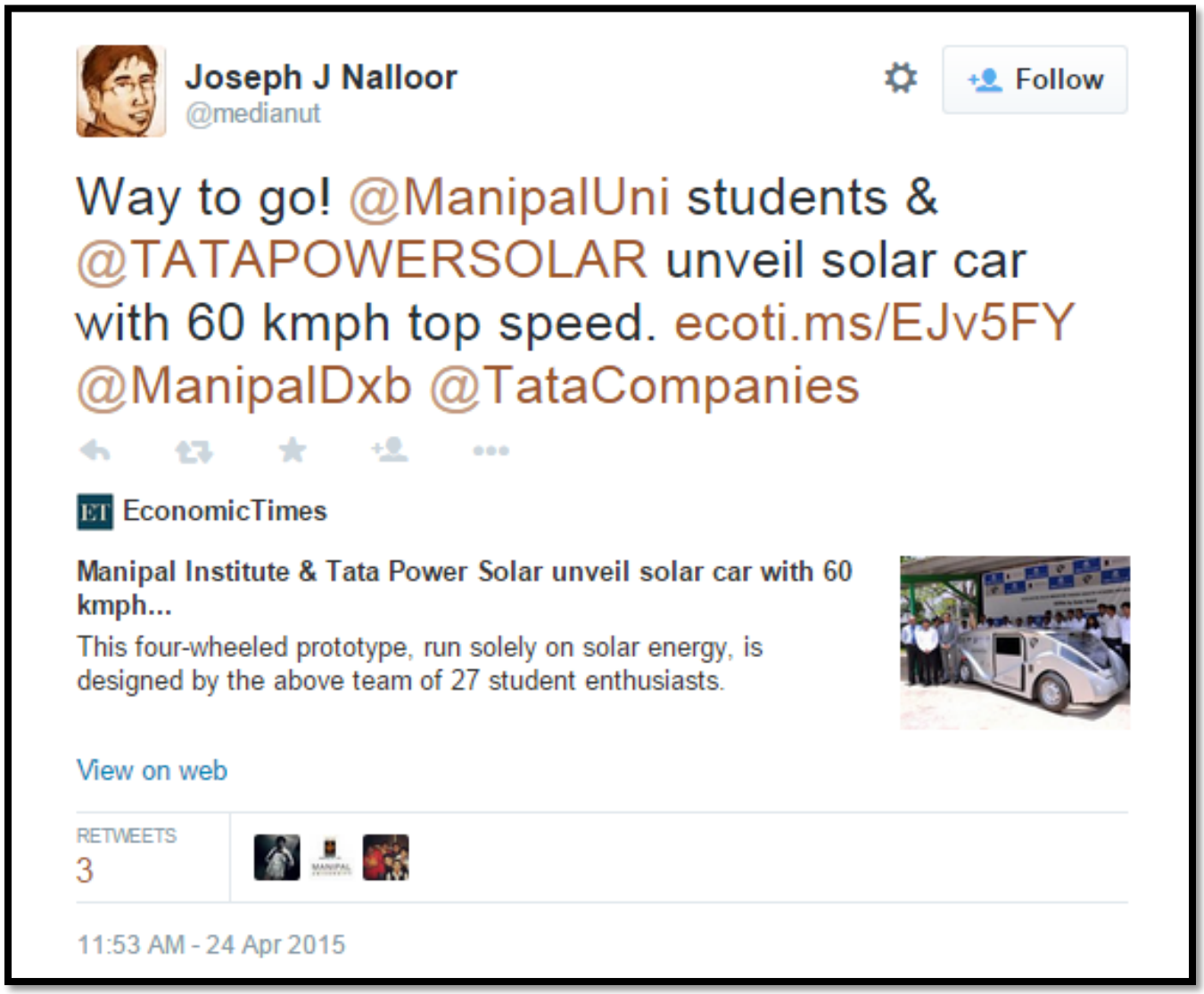

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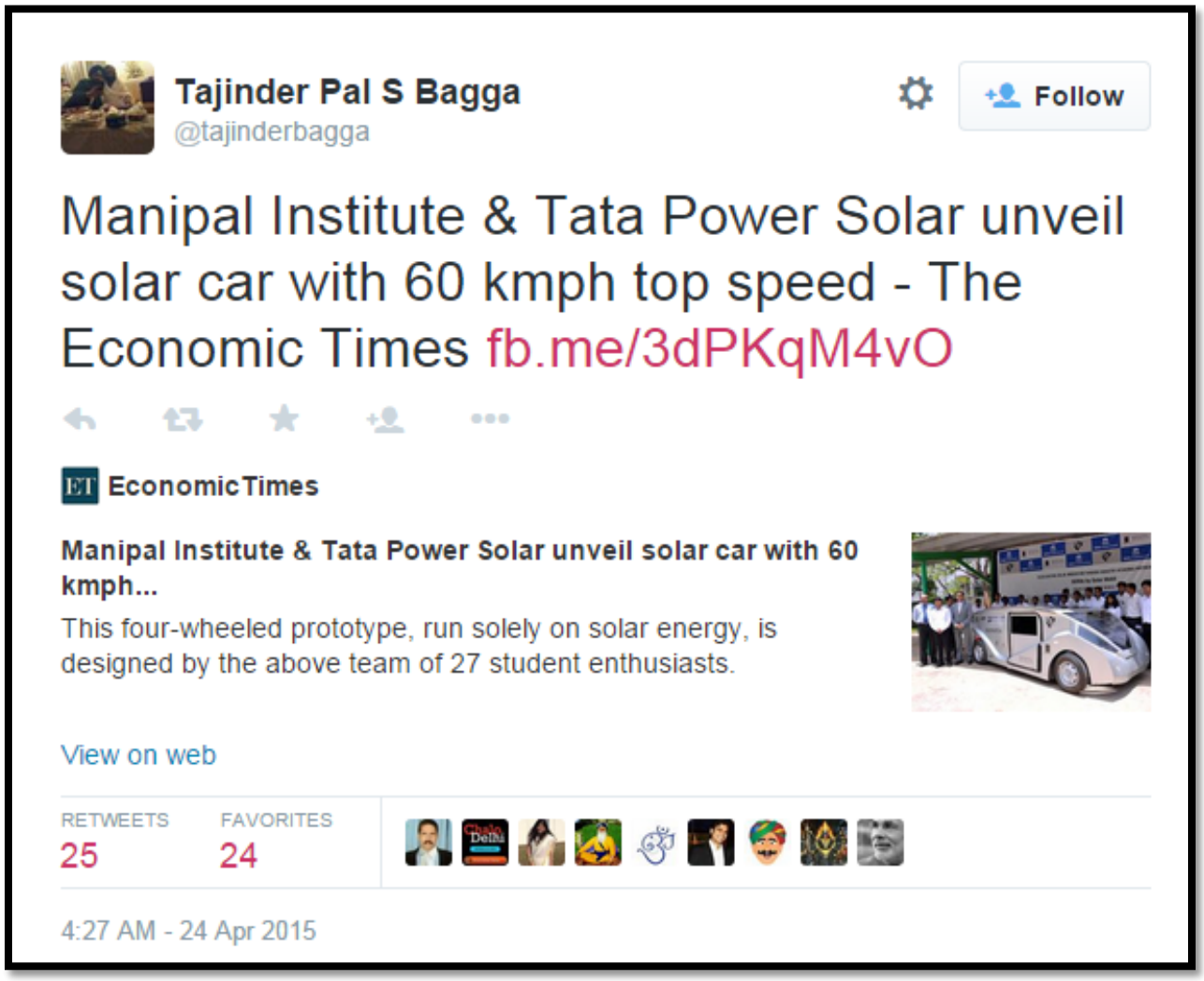

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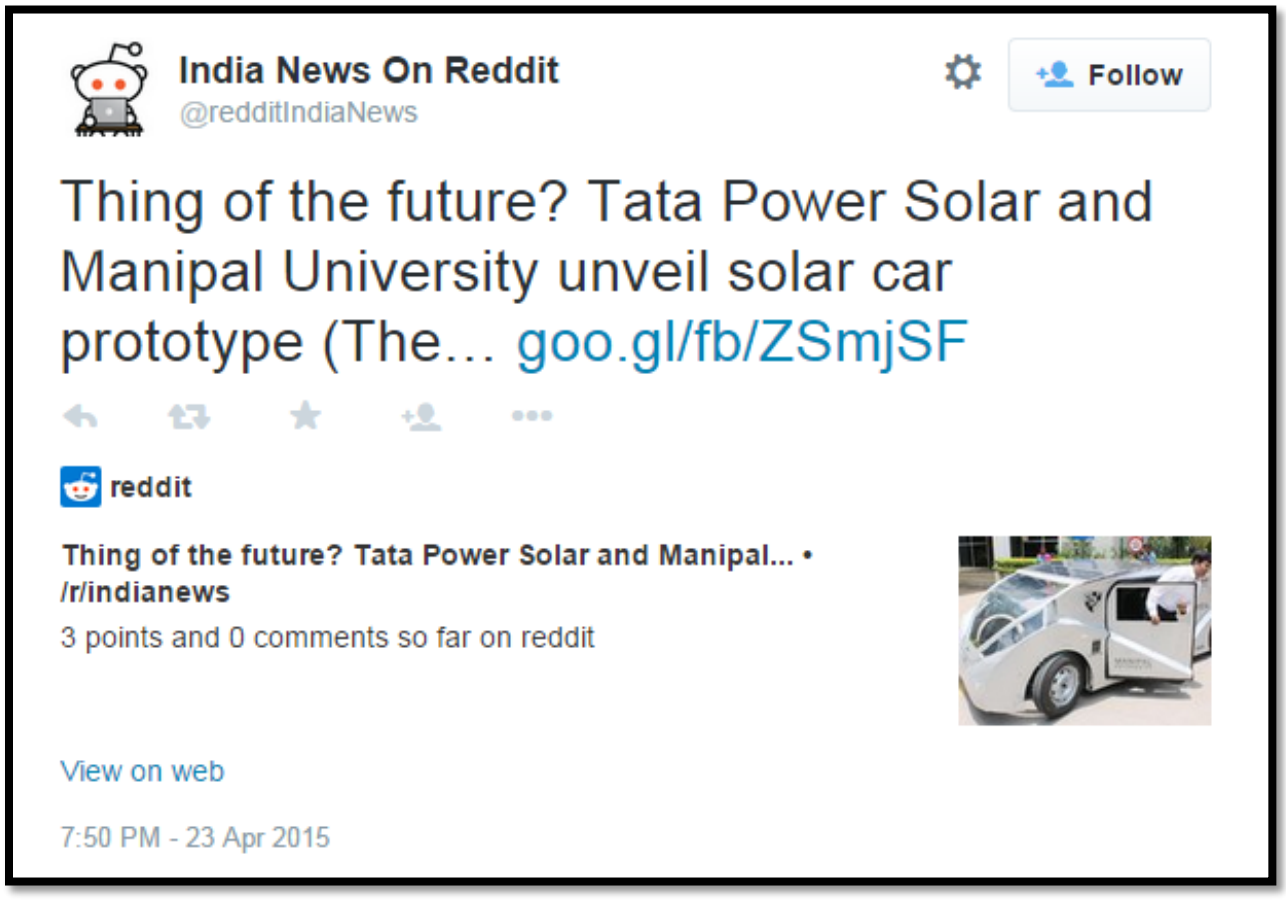

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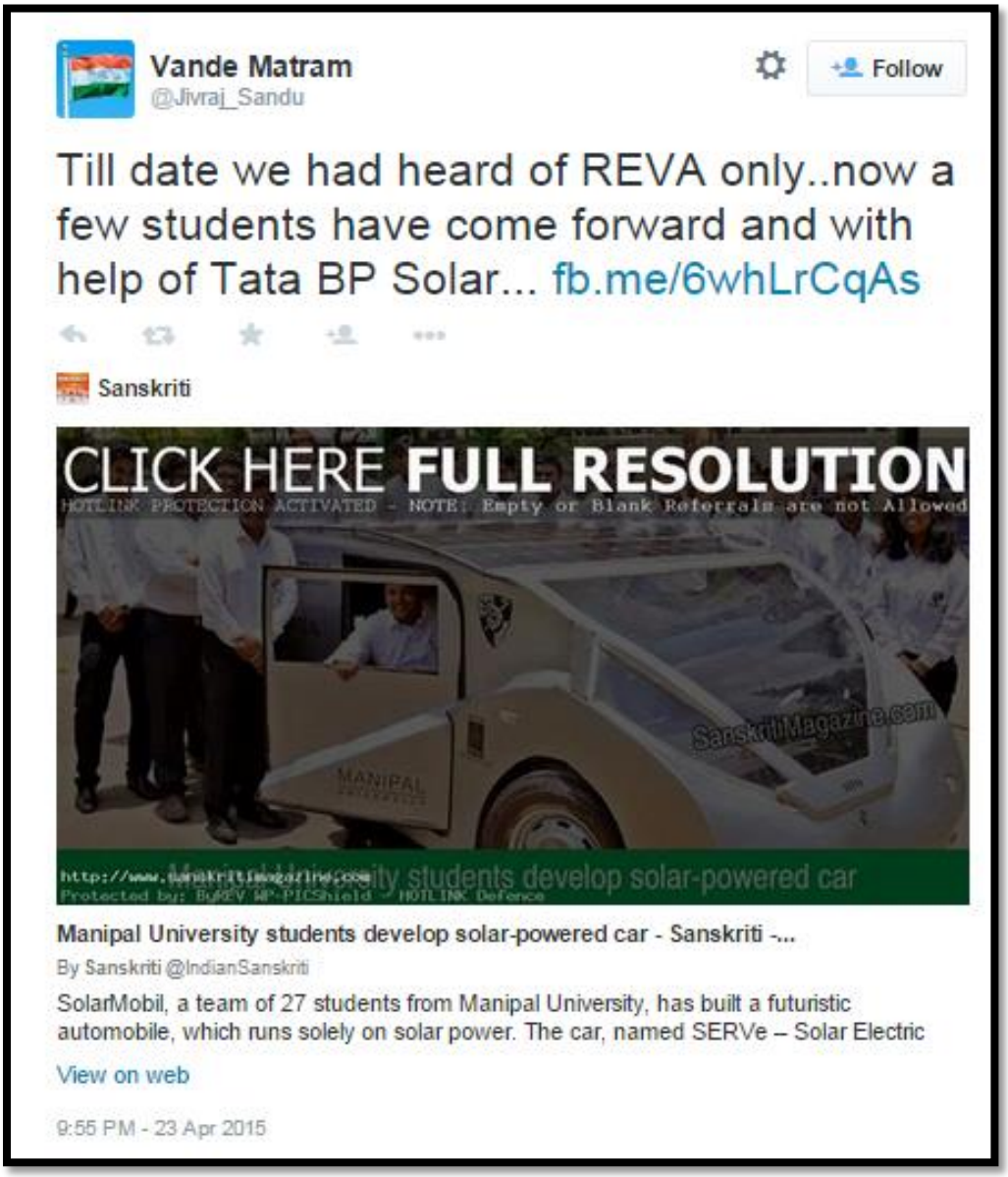

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