



Press Release 04/2018

Ulm, February 26, 2018

Number of Electric Cars Rises from 2 to Over 3 Million

New registrations worldwide up 55 percent / German manufacturers among the top 5

The number of electric cars worldwide rose to 3.2 million according to a count taken at the beginning of 2018. Some 1.2 million are on the road in China, followed by 750,000 in the United States of America. Germany remains in eighth place with just short of 93,000 cars. Last year was a record-setter with 1.2 million new registrations. These figures were determined in a recent survey conducted by the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW). The researchers' analysis showed that the Chinese brands BYD and BAIC accounted for the greatest number of new registrations. Last year's most successful western automaker Tesla retained the top spot this year with 86,700 new registrations, despite the delays in the Model 3's rollout. BMW finished fourth, followed by VW in fifth place.

These and many other statistics on electric mobility are posted at: www.zsw-bw.de/en/media-center/data-service.html.

Count to reach 25 million soon; battery sales surging

Recent years' sharp increase in new registrations continued unabated in 2017 with around 55 percent growth. "If the rate remains anywhere near that, the number of electric vehicles registered annually will exceed 25 million by 2025," says Prof. Werner Tillmetz, a member of ZSW's board of directors and head of the Electrochemical Energy Technologies division. This is in line with announcements made by many manufacturers that they retooled a quarter of their manufacturing for electric vehicles within just seven years.

As Tillmetz goes on to point out, "Growth rates like these also require enormous expansions in cell production. Market demand for cell capacity will then come to more than 1,000 gigawatt hours per year. That is tantamount to twenty new gigabyte battery factories and more than €100 billion in investments—all within just a few years. It will take a broad investment campaign on the part of German and European industries to steer clear of the looming supply bottlenecks and strategic dependencies."

Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW)

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1.2 million on China's roads; USA in second place

Transportation powered by electricity is surging in many countries, above all in China. It is the world's most dynamic market in legacy vehicles and new registrations—1,212,280 electric cars are rolling on China's roads these days. The count nearly doubled in 2017 with 579,000 new registrations. The USA held onto second place with 751,510 e-cars, including last year's 195,140 newly registered vehicles. Japan ranks third with 201,410 cars. Norway is in fourth place, where authorities tallied 187,270 cars, an increase of 62,320. Norway is also at the top of the table when it comes to e-cars' percentage share of all passenger cars. They accounted for 39.3 percent of cars newly registered in 2017 and 6.2 percent of all cars on the nation's roads.

Germany still fares relatively poorly compared to other counters. On the upside, the number of electric vehicles nearly doubled to 92,740 from 2016 to 2017. The count increased by 54,490, which means that Germany is tied with Japan, but still behind Norway, which has a population of just five million. E-car's share of new registrations in Germany came to 1.6 percent.

New registrations show Germany's automakers are catching up

The world's most successful manufacturers are China's Build Your Dreams (BYD) and Beijing Automotive Industry Holding (BAIC), with each accounting for around 100,000 electric cars registered in 2017. Tesla ranks third in the world with 86,770 electric cars. German automakers put in a good showing in terms of new registrations in 2017. BMW took fourth place with 67,940 vehicles, followed by VW with 52,250 e-cars. The German automotive industry sold around 146,000 electric vehicles altogether worldwide. Just 35,000 of these, or 24 percent of the total, were sold on the home market.

"Despite the weak domestic market, the German automotive industry is well on its way to becoming a competitive supplier," says Prof. Tillmetz. "However, it will take a lot more effort to keep pace with the dynamic global growth."

Chargeable vehicles count

ZSW's researchers counted cars with battery-powered electric drives, range extenders and plug-in hybrids; that is, all vehicles that are charged with electrical power. Full and mild hybrids and vehicles equipped with fuel cell technology were not taken into account. This analysis is based on data from the German Federal Motor Transport Authority, government agencies and NGOs abroad, and other sources.



The Zentrum für Sonnenenergie- und Wasserstoff -Forschung Baden-Württemberg (Centre for Solar Energy and Hydrogen Research Baden-Württemberg, ZSW) is one of the leading institutes for applied research in the areas of photovoltaics, renewable fuels, battery technology, fuel cells and energy system analysis. There are currently around 235 scientists, engineers and technicians employed at ZSW's three locations in Stuttgart, Ulm and Widderstall. In addition, there are 90 research and student assistants.

Media contacts

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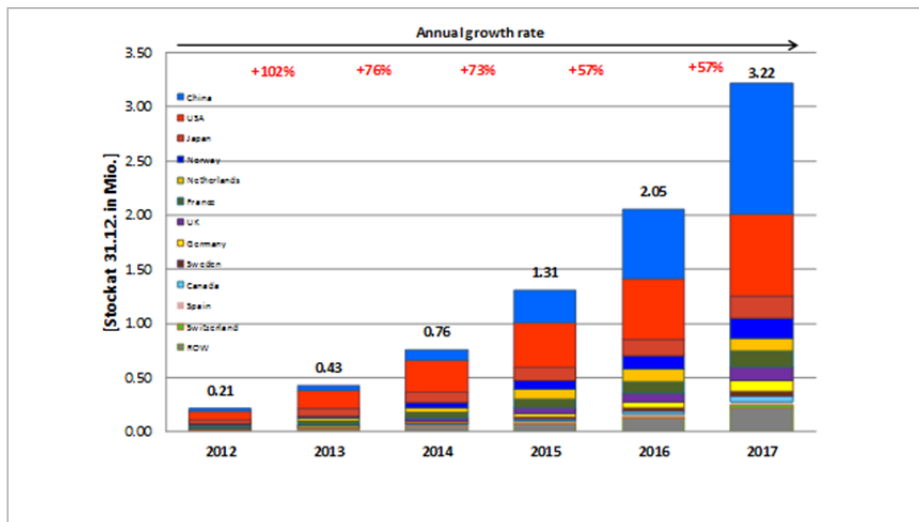
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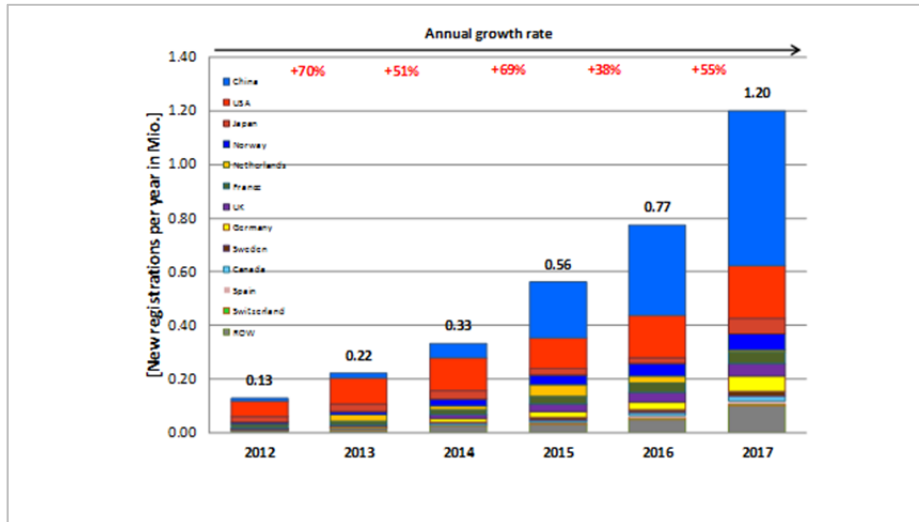
Pictures and a fact sheet on ZSW are available from:

Solar Consulting GmbH



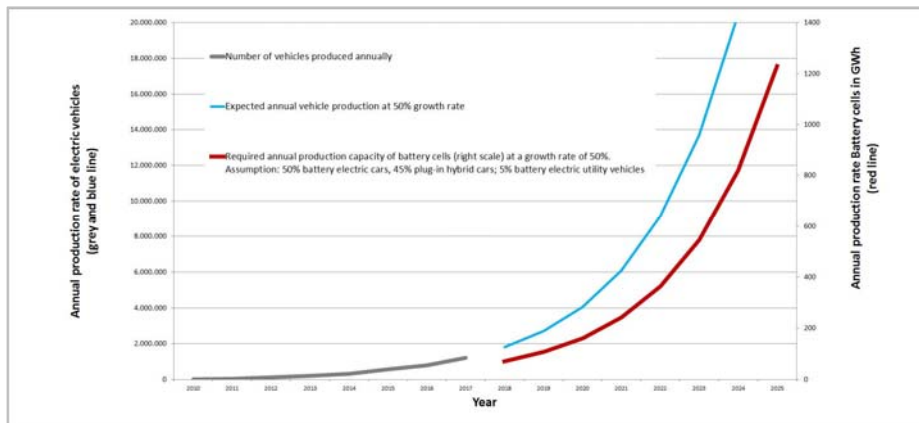
Global count of electric vehicles from 2012 to 2017

Bar chart: ZSW



New electric vehicle registrations worldwide from 2012 to 2017

Bar chart: ZSW



Global annual production capacity needed to produce battery cells from 2018 to 2025 (red line) at a 50 percent growth rate for e-cars

Graph: ZSW