

WirtschaftsWoche

American Beauty

The USA is changing the rules of the game in the global economy: they are attracting companies from all over the world with lots of money and cheap energy, turning their national economy to green. Germany remains only as a spectator.

Julian Heissler | 6.30.23



In Green We Trust

Oil and gas have made America rich, wind and sun should make it even more prosperous in the future

The day that changed everything – Aniruddha Sharma remembers it very well. It is August 16, 2022. In the State Dining Room of the White House, US President Joe Biden picks up a pen and signs a law with the unwieldy, and at the same time, misleading name Inflation Reduction Act (IRA). In fact, it's less about currency devaluation than about the future: the IRA is supposed to mobilize almost 400 billion dollars for the expansion of renewable energies and the green conversion of the American economy. It is "one of the most important laws in our history," Biden says. An exaggeration? Not for Aniruddha Sharma. The IRA, he says, "made the world tremble".

Sharma is the founder of Carbon Clean, a start-up specializing in removing dirty carbon from industrial processes. From the headquarters in London, he has overseen almost 50 projects on three continents in recent years. The small company was also active in the USA, but the country was just one of many locations. A core team of three employees took care of the market. That was enough.

Then came the IRA.

"We're now receiving a volume of inquiries that we simply couldn't handle from London," reports Sharma. In March, Carbon Clean announced a massive expansion. The company moved into new headquarters in Houston – the self-proclaimed “energy capital of the world” – and hired more than 20 new employees. One of the major customers there: oil multinational Chevron.

Demand for new carbon capture technology is growing all over the world right now, in Europe, Japan, Canada, the Middle East - things are happening everywhere, says Sharma. Nevertheless, the USA is an exception. More dynamic. More quickly. Simply, more powerful. And that's largely because of Joe Biden's industrial policies. "The incentives are simply a multiple of anything else that's happening anywhere," Sharma explains.



In Tennessee, Ford is building a new plant for electric cars and a battery factory

Biden's billions have sparked a gold rush mood in the US – a game changer, unleashing companies and encouraging them to invest. In his first two years in the White House, the US President maneuvered three bills through Congress intended to fuel the transformation of the American economy: one for infrastructure, a second for strengthening the semiconductor industry, and the IRA. It works on a principle that is as simple as it is effective: Anyone who invests, expands future technologies and reduces CO₂ receives tax credits, grants or loans. It is the most ambitious economic policy control program in decades. The subsidy is subject to conditions, and only flows if parts that are largely produced in North America are installed. But that doesn't seem to be a deterrent so far. On the contrary.



Chip, chip, hooray!

The US giant Intel is planning two new semiconductor factories in Chandler, Arizona

Since then, there have been reports of success: The Taiwanese semiconductor company TSMC is investing 28 billion dollars in Phoenix, Arizona. Texas Instruments: 30 billion in Sherman. IBM: 20 billion in the Hudson Valley. Samsung: 17 billion in Texas. Toyota, Ford and Hyundai: around five billion each. The list could go on (see map on page 18).

According to data from the White House, private companies have now invested around 491 billion dollars in future technologies, since Biden has been in office. 219 billion dollars of this alone has been in semiconductors and corresponding technologies and 149 billion in the production of electric cars and battery technology. Credit Suisse has calculated that since the start of the IRA alone, 77 billion dollars in investments have been announced, of which around 50 billion are in battery technology.

“When I talk climate, I talk jobs,” the US President likes to say – when I talk about climate protection, I mean jobs. Biden wants to use his presidency to steer the world's largest economy onto an ecological growth path and instill a new optimism in the workforce. Every report is further proof of his success. The desired message: The time of starvation is over. America is back.

Demand accelerated by Ten Years

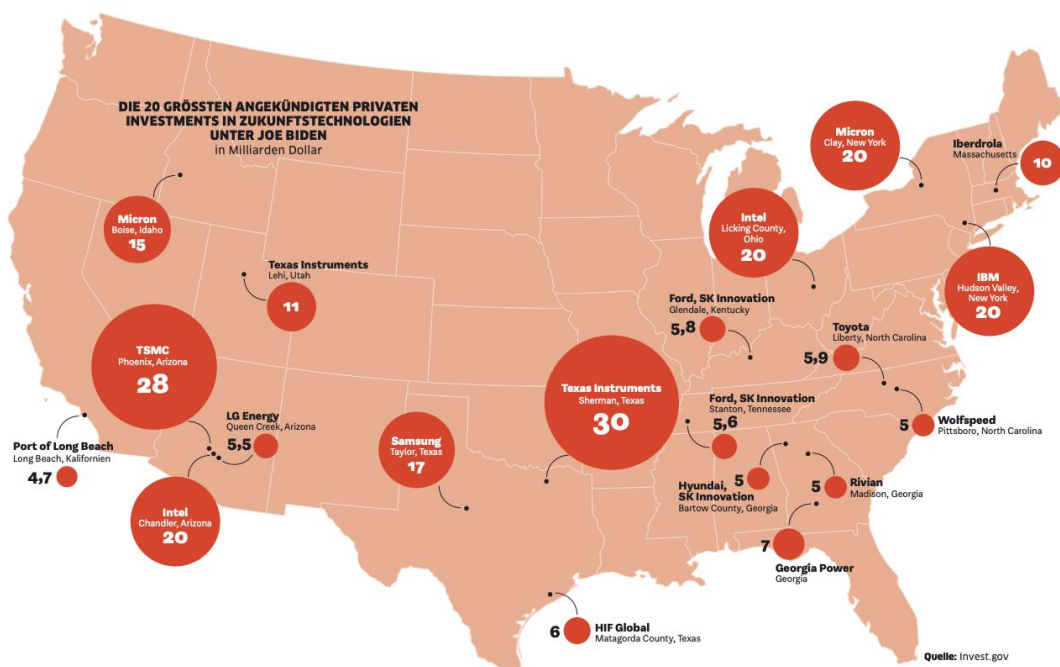
Sweltering summer heat hangs over Port Bienville Industrial Park. Three dogs lie panting on one of the many green spaces along the road that runs through the industrial park in southern Mississippi, US. A few meters away, a short freight train winds its way along the tracks between the existing factory buildings. Several chemical companies operate plants here, benefiting from low costs and the proximity to the Gulf of Mexico.

But that can't cover up the large vacancy rate on the site. No upswing anywhere. Not yet.

Here, in the somewhat sleepy southern tip of the USA, great things are to be created. The energy company Hy Stor Energy announced last year that it would build a hub for green hydrogen in Port Bienville. Around 350 tons of pollution-free energy for industry could be generated per year - also for export all over the world. The first excavators are expected to roll before the end of the year, and the system will be connected to the grid in 2026. "We're on a very good path," said Claire Behar, Hy Stor Energy's Chief Commercial Officer.

The plans for the hub have been going on for some time. Things went rather slowly for five years. But Biden's industrial policy is now acting like a turbo. In May, the company applied for \$1 billion from a Department of Energy pot set up as part of the infrastructure package. Hopes are growing with the tax rebates that green-produced hydrogen is likely to benefit from as a result of the IRA. Both laws combined "have accelerated the demand for green hydrogen by ten years," says Behar. The original plans? Long outdated. The appetite for more is whetted.

But more will also be needed if Biden wants to achieve his ambitious goals. Example of green hydrogen: According to the plans of the White House, a whopping 50 million tons are to be produced in the United States every year from 2050. Today the USA produces a total of 10 million tons - 95 percent of it with conventional, environmentally harmful processes. So, the gap is huge.



The 20 biggest announced private investment in future technologies under Joe Biden

The same applies to wind energy: by 2030, new offshore wind farms off the American coast are expected to generate a gigantic 30 gigawatts of clean electricity. It is currently only a fraction, around 42 megawatts – but around 940 MW are under construction, with a project off the coast of Massachusetts alone accounting for 800 MW. For comparison: Germany alone already has offshore wind power with a capacity of a good 8 GW. So we have to catch up and the pace is great.

Rethinking in Louisiana

Now the American can-do spirit is taking over. "30 gigawatts, that opened our eyes," says James Martin. The engineer walks through the research hall of his company Gulf Wind Technology in the port of Avondale, a suburb of New Orleans, in a yellow safety vest and blue safety goggles.

For more than a year, Martin and his team have been working here in Louisiana to develop offshore wind turbines specifically designed for use in the Gulf of Mexico. Not an easy task. The winds over the Gulf are usually slower than, for example, in the Atlantic. Hurricanes regularly sweep across the region. The rotors that Martin's company is working on therefore have to work in very different weather conditions.

For a long time, interest in wind power in Louisiana was manageable. The state is one of the traditional strongholds of the oil and gas industry. Renewables had a hard time here for a long time. But change is coming. "Louisiana is probably one of the states hardest hit by climate change," said Brad Lambert, deputy chief of the state agency for economic development.

The rethinking began in the capital, Baton Rouge. The governor made the pilgrimage to the climate conference in Glasgow and set his own goals for the expansion of renewable energies. Then came the government programs. Since then, entrepreneurs like Martin have literally felt a tailwind. The British oil multinational Shell recently announced an investment of ten million dollars in Gulf Wind Technology. The money is intended to speed up work on the innovative turbine. A prototype should be ready in the coming year, and the innovative wind turbines could then generate electricity in 2030. "We are opening up a whole new market with this," says Martin.

Such investments are flowing across the country right now. Funding projects can be found in almost all 50 states. And almost every day there are more.

Pushing and pushing back

Nor is the IRA's story one about green spaces, big bucks, and big plans. America's competitors nonetheless regard the development with awe. There is concern that the financial lures will attract investments from other countries - not least from Germany. "Once the United States has gotten its act together in a non-partisan way and gets things going, they are simply a force," says a man from the innermost circle of the federal government. "We see that now."

Robert Habeck has his own perspective on the partner in Washington, who suddenly appears greener and above all, more determined than the original. On the stage of the CDU Economic Council, the Economics Minister recently outlined what Germany and Europe are missing in order to be on an equal footing in the transatlantic competition: the will to unconditional debt. "We have to know in advance how expensive it will be," said Habeck, referring to their own subsidy programs. The Americans don't care.

The exorbitant ten billion euros subsidy for the US chip giant Intel in Magdeburg can therefore also be read like this: as a small sign of life of one's own European subsidy capability. "If the others push, you have to push back," Habeck explained recently. "Otherwise you lose."

But his message does not get through – many companies are currently turning their backs on Europe. In German medium-sized companies one hears a sentence again and again, in variations: Let's take a look around in the USA. We build in the USA. We are considering going to the US. Whether Aurubis, Boehringer Ingelheim or Hapag-Lloyd – they have all announced projects, research centers or new plants in the past few months.

Wilhelm Goschy experiences the increased interest in his own demand. The boss of the management consultancy.

Staufen has many customers in Germany and Europe. Staufen is a specialist in lean management – in plain English: The consultants help companies to ramp up factories and get them up and running. "Our customers are currently seeing great advantages in the USA," reports Goschy. The IRA's tax incentives, coupled with low energy prices and pressure to become less dependent on China, are making the United States increasingly attractive. "You're already thinking about where the next factory should be built," says Goschy. And that's mostly not the old location.

The economic miracle has a new home.



Worn by the wind

James Martin, head of Gulf Wind Technology, benefits from the USA's green boom

Space at Ebm-Papst is running out

Mark Shiring is thinking about expanding his factory again. He hadn't expected that. Just last November, the boss of the US subsidiary of the German fan manufacturer EbmPapst opened a new plant in Telford, Tennessee. Engines are assembled there on 1.6 hectares of factory space. Eight months later, the space in the new facility is already running out again. "The demand for e-cars, renewable energy and commercial ventilation is currently growing enormously," says Shiring. "We'll need a new building in a few years to be able to keep up."

The US plans of the German world market leader cannot be found in any press release; none of the jubilant messages that the White House now regularly sends out about the success of the IRA. But they are also closely related to Biden's green offensive. For years, Shiring and his people have been working on relocating as much of the supply chain as possible to the USA – a project that is now paying off. Because some funding lines of the IRA are only open to companies that predominantly use components from US production – and the components from Ebm-Papst now largely meet this requirement.

So Ebm-Papst does not even benefit directly from the Inflation Reduction Act or other subsidy laws. The company does not receive any grants and currently does not receive any special tax breaks. And yet it is one of the winners of the new American boom. The flood of money raises many ships.

Even the big ones. Volkswagen for example. The diesel scandal has been digested, the Wolfsburg-based company in the USA has also been building electric cars for years – now it's paying off twice. Their purchase is tax-advantaged by the IRA – but only if they were mostly produced in North America. The electric SUV ID.4, manufactured in Chattanooga, Tennessee, meets the strict Buy-American regulations. "We will seize the opportunities presented by the growing electric car market," says Pablo Di Si, head of the Volkswagen Group of America. The fact that the ID.4 is now receiving full funding is "promising tailwind". In March, VW announced that it would build a \$2 billion factory in South Carolina to produce Scout electric trucks. The plant should be able to produce around 200,000 vehicles per year. The opening is planned for 2026.

So, this is what the new American dream looks like. In Tennessee. In Louisiana. Or in Oklahoma.

The e-car start-up Canoo, for example, is investing 560 million dollars there alone, and the rare earth manufacturer USA Rare Earth another 100 million. The largest investment in the state north of Texas, however, comes from Europe. Italian solar panel maker Enel announced in May that it would pump more than \$1 billion into the state to build a new solar panel factory. Even Joe Biden was publicly happy about Enel.

That, too, means the IRA: successes of the improbable kind. At first glance, solar energy and Oklahoma hardly go together. The state has long been closely linked to the oil and gas industry. Most recently, the Republican-dominated legislature passed anti-ESG legislation to restrict investments committed to social or environmental principles. Tulsa, the state's second-largest city, even billed itself as the "Oil Capital of the World" for many years.

Enel is now planning to set up its solar manufacturing plant outside of the city limits. Governor Kevin Stitt sees no contradiction in this. "I'm completely agnostic about it," he says. "If you want to invest here, then I will support you."

The IRA boom is a touchy subject for a Republican like Stitt. The law passed Congress without a single Republican vote. The opposition once portrayed it as an inflation driver, then as debt-mongering. Now the Republican-governed states are benefiting the most: Four of the five states in which the most wind energy was produced last year are firmly in Republican hands. Conservative states are among the most successful producers of solar power and are way ahead of the curve when it comes to green hydrogen plans.

However, the governor rejects the idea that state funding could have anything to do with this development. "Oklahoma has been an innovator in the energy sector for more than 100 years," he says. "How things develop is dictated solely by the market."

Nevertheless, the Republican does not want to forego the billions made available by the federal government. He couldn't do that either – neither legally nor politically. After all, the states are in competition with each other and put together additional subsidy packages to attract industries. "I didn't support the IRA, but of course I will use it to get industrial jobs into Oklahoma," Stitt says.

“We are already excited”

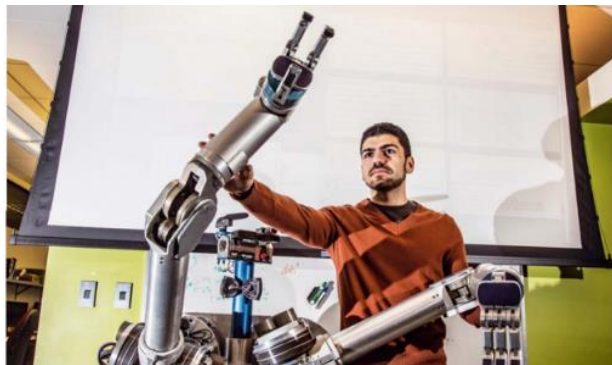
The next settlement is already imminent. A manufacturer of car batteries wants to produce in the state. Negotiations with the governor are in the final stages. "We're talking about a \$5 billion investment and 3,500 new local jobs," Stitt said. "We are already excited."

The gold rush has long since gripped the administrations and offices. With hundreds of billions of dollars currently being invested, every part of the country is hoping for the next settlement, the next bid. Regions that have been preparing for structural change for some time and that qualify for additional support from Washington have a clear advantage.

Pittsburgh bets on robotics and AI

For decades, Pittsburgh, Pennsylvania was synonymous with coal, steel and heavy industry. The raw material treasures under the Appalachian Mountains and the proximity to the metropolises of the Midwest made the city one of the most important economic centers of the industrialized USA – and once formed the cornerstone for the legendary fortunes of the Carnegies, Mellons and Fricks.

The structural change of the 1980s was followed by a crash. The unemployment rate in the region climbed to almost 20 percent at times, and the city and the surrounding towns fell into disrepair. A disused steel mill was good after all – it was used as a backdrop for the first "Robocop" film, as a post-apocalyptic set design.



Robocop 2.0

Researchers at Carnegie Mellon University in Pittsburgh are working on the latest robotics

Today, the city is in a much better position – thanks to investments in future technologies. Today, Pittsburgh is considered an important hub for robotics and artificial intelligence. Big tech companies are on site, Tesla operates a test track, last year, a manufacturer of solar panels also opened a plant in a disused steel factory.

The IRA is supposed to give the region the next boost. When Matt Smith talks about it, he raves. As Chief Growth Officer of the Allegheny Conference, a regional economic development association, he is responsible for growth. And yes, that's what the IRA "did in all major sectors," says Smith. "We continue to see great interest from companies of all sizes to invest here."

After all, the region has a lot to offer: it has some excellent universities, numerous disused factories that could be reactivated – and a particularly generous bouquet of incentives and government subsidies. This is because southwestern Pennsylvania is considered a so-called "energy community." This is what the U.S.

government calls regions where coal, for example, has played a major role in the local economy. The IRA offers additional tax incentives in order to promote the settlement of new technologies there.

Smith has no time to lose – just like everyone else. The IRA programs, worth billions, are budgeted for ten years – after which Congress would have to extend them. Not a matter of course in times of party-political polarization. Nevertheless, some companies are already counting on the tax rebates remaining in place for the longer term.

Aniruddha Sharma, the London founder of Carbon Clean, is also hoping for the same. In order to achieve the ambitious goals, he will need state support for many years to come. What if the grant runs out? He prefers not to think about it. A look at the history books gives him hope: the tax credit for electricity generation from renewable energy sources was introduced in the USA in 1992. It was to disappear again after seven years. "But," says Sharma, "they still exist today."

Forever IRA. It would be his own personal American dream.