



15 February 2019

4 February 2019

German transmission system operators publish first draft of grid development plan 2030, version 2019

- Four-week consultation process for Grid Development Plan (GDP) to start
- Plan ensures incorporating 65 per cent of renewables, taking into account stipulations of German Climate Action Plan 2050
- Market and grid innovations minimise need for additional grid expansion
- All measures of Federal Requirements Plan confirmed

Today, the transmission system operators (TSOs) 50Hertz, Amprion, TenneT and TransnetBW, submitted the first draft of the Grid Development Plan (GDP) 2030, Version 2019 and published it on www.netzentwicklungsplan.de. This marks the starting point of a public four-week consultation process, during which every citizen can submit their comments on the GDP until 4 March 2019, online, by e-mail or in writing. The comments will be taken into account for the second draft of the GDP, which will then be submitted to the Federal Network Agency (Bundesnetzagentur, BNetzA) for evaluation.

The results concerning the phase-out of electricity generation from coal as presented on 26 January 2019 by the Commission on Growth, Structural Change and Employment (Wachstum, Strukturwandel und Beschäftigung, WSB) set up by the German Federal Government could not yet be taken into account in detail for the first draft. However, the approved framework scenario is already based on a significant reduction of the coal-fired power plant fleet. The proposals by the WSB commission for installed coal-fired power plant capacity (17 GW) for 2030 match almost exactly the capacity set out in scenario C 2030 (17.1 GW). The TSOs will analyse the results reached by the commission and issue an evaluation concerning the impact on the identified requirements for grid development, in particular for scenario B 2035.

All scenarios of the GDP for the target year 2030 fulfil the 65 per cent target for renewables in gross electricity consumption laid down in the coalition agreement of the Federal Government. In addition, the CO₂ targets for the different sectors for 2030 from the Climate Action Plan 2050 of the German Federal Government have also been met. The BNetzA stipulations on minimum capacities at the cross-border interconnectors for ensuring smooth cross-border electricity trading, resulting from European processes for developing the transmission grids and the internal European energy market, have also been included in the calculations.

Five scenarios

The scenario framework as approved by BNetzA on 15 June 2018 was the starting point for drawing up GDP 2030 (2019). The scenario framework comprises a total of five scenarios: a short-term scenario B 2025, three scenarios with the target year 2030 (A, B and C) and the long-term scenario B 2035.

The scenarios A 2030, B 2030 and C 2030 differ regarding the use of innovative technologies, storage technologies and flexibility options that have been significantly expanded further compared to GDP 2030 (2017). B 2035 provides a long-term future outlook in order to assess how sustainable the grid measures that have been identified for 2030 are. The new scenario B 2025 is used to prove the effectiveness of *ad-hoc* measures. These are aimed mainly at avoiding costly grid interventions such as redispatch and feed-in



15 February 2019

management once the last nuclear power plants are offline and before the legally stipulated grid expansion projects laid out in the Federal Requirements Plan are fully implemented.

All scenarios still show a growing gap in electricity generation within Germany. While generation in northern and eastern Germany is more than twice as high as local demand, there is not sufficient electricity produced in the south and the west of Germany to cover consumption there. Between a quarter and half of the annual electricity demand in these Federal States must be covered by imports from within Germany or other countries. Renewable energies continue to grow and become ever more important: wind (onshore and offshore) is the energy source with the biggest share in the energy mix in all scenarios.

Tools for minimising the need for grid expansion

The Grid design in GDP 2030 (2019) is based on economic, cost-minimising market modelling. For these models, conditions are taken into account that will not necessarily come to pass in real operations, for example an ideal market, assumed hourly mean values and consistent peak capping for onshore wind and photovoltaics in all of Germany. In their sum, they lead to a clear reduction of the transmission task. Therefore, GDP 2030 (2019) does not reflect an expansion of the transmission grid ζ for the last generated kilowatt hour ζ .

With the objective to reduce additional requirements for grid development to a minimum, the calculations in GDP 2030 (2019) also take advanced technologies in grid planning and power systems management into account. These include monitoring of overhead lines, the installation of high-temperature overhead conductors as well as elements for actively controlling the power flow ζ and thus optimally utilising the existing grid. Also implicitly included are innovations that are not yet available, which may reduce the requirement for grid expansion in the future.

Compared to the previous GDP 2030 (2017), these assumed market and grid developments result in a significantly greater proportion of renewables being able to be integrated into the system with a reduced expansion of the grid. The proposed grid allows for the integration of 65 per cent renewables while at the same time complying with the targets set out in the Climate Action Plan 2050.

Requirement for modification and expansion of the ultra-high-voltage grid

All projects aimed at strengthening and expanding the ultra-high-voltage grid included in the Federal Requirements Plan and the measures confirmed in December 2017 by BNetzA are required within the context of scenarios B 2030 and B 2035.

Expanding renewables to 65%, while at the same time significantly reducing electricity generation from coal requires two powerful DC interconnectors exceeding the specifications outlined in the Federal Requirements Plan with a total capacity of four gigawatts (GW) to transport electricity from Schleswig-Holstein, via Lower Saxony and North Rhine-Westphalia to Baden-Württemberg, with a total length of around 1,160 km (DC21/DC23 and DC 25). In addition, a total of approximately 2,900 km in grid improvements and approximately 450 km of newly installed grid length (AC and DC) are required in scenario B 2030 that have not yet been included in the Federal Requirements Plan

Investment costs GDP 2030 (2019)

The estimated investment costs for the proposed onshore measures ζ including approximately 11.5 billion euros for the starting grid and costs for ad-hoc measures ζ are in the region of 52 billion euros in scenario B 2030. These costs will arise over several years.



15 February 2019

The increase in costs compared to GDP 2030 (2017) is due to the standard costs being adjusted to reflect market developments. Here, in addition to adjusting the costs of the actual asset costs, the costs for acquiring land and for planning and approval processes were also taken into account for the first time in the specific cost estimations. The changed make-up of measures also leads to cost increases. In particular the expansion of the DC grid in scenario B 2030 (2019), with an extra 1,160 kilometres compared to B 2030 (2017), had a significant impact on the costs. However, in this context full cabling of the additional DC interconnectors has been assumed in order to achieve higher acceptance.

Requirement for expansion to connect offshore wind power

In previous years, the Offshore Grid Development Plan (O-GDP) was drawn up together with the GDP. This has been changed by the legislator and the O-GDP is now included in the Offshore Area Development Plan (Flächenentwicklungsplan, FEP) drawn up by the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie, BSH). The infrastructure required to connect offshore wind turbines in the years 2030 and 2035 was included in GDP 2030 (2019).

The targets concerning the expansion of offshore wind power have been increased to 17 GW (scenarios B 2030 and C 2030), 20 GW (scenario A 2030) and 23.2 GW (scenario B 2035) in the approved scenario framework compared to the target of 15 GW by 2030 laid down in the Renewables Act and set out in the GDP draft.

For the additional offshore grid this results in a length of 1.924 km in scenario B 2030 with a transmission capacity of approximately 6.4 GW and a length of 3,439 km for the outlook in scenario B 2035, with a transmission capacity of approximately 12.1 GW.

The estimated investment volume for the German offshore grid is approximately 18 billion euros for the scenarios B 2030 and C 2030, 24 billion euros for scenario A 2030 and approximately 27 billion euros for scenario B 2035. Investments of approximately 8 billion euros for expanding the start offshore grid have been included in these costs.

The results from an additional sensitivity calculation show that an increase in feed-in by 1 GW from offshore wind energy from areas in the Baltic Sea that are easy to develop, can be accommodated by grid infrastructure that has already been planned. This results in additional flexibility for the political expansion target for offshore wind energy in 2030 with a bandwidth of 17 to 20 GW.

More information at www.netzentwicklungsplan.de

Amprion
<http://www.amprion.net>

4 February 2019

Regulatory process crucial in restoring Eskom's operational and financial position

Eskom has made an appeal that its operational requirements that pass the regulator's prudence test need to be compensated through the regulatory process to enable it to recover technically and financially. This message was shared at the National Energy Regulator of South Africa (NERSA) public hearings in Midrand where Eskom also confirmed the revenue requirement remained unchanged, recovered over the lower sales resulting in the percentage increase to 17.1%, 15.4% and 15.5% over the three years.

Mr Calib Cassim, Eskom's Chief Financial Officer said, "Our stakeholders who include debt providers, rating agencies, auditors are awaiting this crucial decision from our MYPD 4



15 February 2019

and RCA applications as an important part of the solution to return Eskom to financial and operational sustainability. As disclosed in our interim financial statement for the period ending September 2018, Eskom's going concern status is highlighted as emphasis of matter showing the level of financial distress. We are projecting a net loss of close to R20 billion at financial year end and it is clear that while we have maintained operating costs escalations around inflation levels, Eskom cannot solve financial and operational sustainability challenges that it faces alone. This loss situation will continue for the next few years even with the applied-for increases."

The analysis shared by Mr Deon Joubert, Corporate Specialist, illustrated that Eskom has been providing a subsidy to customers over many years. Eskom had to fund this subsidy through increased borrowings. However, Mr Cassim clarified that this "credit card phenomenon" is not sustainable any longer. The regulator would need to make a decision on whether the electricity consumer or the taxpayer is accountable for efficient costs. "The regulatory process as well as shareholder support is crucial. The shortfall in tariff cannot be solved through cost reductions alone, and further indebtedness adds to the problem. We were encouraged by NERSA's own presentation in parliament where they showed that Eskom had not recovered revenue allowed by the Regulator over the MYPD 3 period," said Cassim.

Eskom confirmed that it would continue to apply the MYPD methodology and the precedent set by the 2013/14 RCA decision. "We note the impact on electricity users and have made two changes in our RCA application following questions from the NERSA panel on the fees recovered from McKinsey and the period over which to recover the RCA. The first one is using the money recovered from McKinsey to reduce our application of R21 billion to R20 623 billion and secondly, to recover the 207/18 RCA over a period of three years from 2020 to 2023. Delaying recovery of the RCAs puts more pressure on Eskom's finances," said Cassim.

Mr Mpumelelo Mnyani Senior Manager for Sales Forecasting explained that there were a myriad of factors that impact Eskom's sales forecasting process. Sales volume adjustment is one of the factors that led to the adjustment in Eskom's application. "We are confident that Eskom's sales forecasting process is robust but it must be noted that the market is quite volatile. We therefore appreciate the fact that the NERSA MYPD methodology is cognisant of this fact and allows Eskom to review its sales forecast closer to the decision date. We have revised our sales forecast down and we welcome NERSA to run a verification process on the new numbers. We further request NERSA to consider allowing Eskom to revise these numbers annually based on the latest available projections in order to avoid increasing divergence."

Responding to a comment alleging that Eskom denies the impact of price on its sales, Mnyani reiterated that Eskom accepted that price has an impact but that it wasn't the only factor. He made an example of investors who quote the price of transportation from the harbour to inland as being prohibitive compared to importing from international suppliers.

Talking on the impact of electricity price increases, Eskom Treasury Consultant Mr Kabelo Masike showed that the National Treasury's study estimated price elasticity of demand to be less than -0.5 with 15% price increases. "Price of electricity is relatively inelastic even though it has increased somewhat over time. NERSA's own analysis showed that there would be 1.8% growth in sales with 5.23% electricity price increases, however, this projected increase by NERSA did not materialise as anticipated. This is a demonstration that projections for a single year depending on whatever factors you put may not materialise simply because there are various factors that impact your projections. We are mindful of



15 February 2019

sectors that will feel the adverse effects of price increases like gold mining and low consumption residential customers but we submit that there must be programmes to assist distressed customers instead of keeping the price of electricity artificially down, which would deny Eskom the ability to fund investments and maintenance required to sustain adequate security of supply for all customers.”

In addition, Masike indicated that Eskom has such a high concentration in the market that doing a Small but significant non-transitory increase in prices (SSNIP) study of the impact of our prices on demand as requested by NERSA would be a fallacy. “There is no idle capacity waiting to fill the gap when Eskom is not available. While alternative sources make a case for change for some of our customers, the high load customers, for instance, would not be wholly dependent on renewable energy coupled with battery storage as the technology is not yet commercially viable or technically proven.”

“Customers require reliable electricity. If Eskom cannot meet its commitments to produce electricity, it affects the customers as well as the country. An inadequate security of supply has more negative repercussions to economic growth and social welfare than a tariff increase required for Eskom’s sustainability. If Eskom’s financial situation does not turn for the better it will have dire consequences. Lenders will recall their loans as Eskom will be in breach of the loan covenants and Government will be liable to pay for the loan agreements that are guaranteed causing a run on a third of Government debt and Eskom will also have to prepare the Audited Financial Statements on a liquidation basis,” ended Cassim.

In response to the Energy Regulator alluding to Eskom’s application being defective, it was clarified that this is not the case. Eskom under oath provided facts and evidence to motivate its application for efficient and prudent revenue.

Eskom

<http://www.eskom.co.za>

4 February 2019

Mexico cancels clean energy auction

Mexico's grid operator and regulator Cenace (the National Energy Control Centre) has scrapped plans for the country's 5.9TWh clean energy tender.

It had previously suspended the auction in December, a day before bids were due, and two days after new president Andrés Miguel López Obrador was sworn in.

Brian Gaylord, senior analyst for Latin America at Wood Mackenzie Power and Renewables (formerly Make Consulting), described the decision to cancel the tender as "ludicrous". He tweeted that it was "extremely difficult to envision a logical reason" for the cancellation.

He told Windpower Monthly the decision appeared to be politically motivated as the new administration has vowed to modernise its old thermal and hydro power plants.

In his inauguration speech, Obrador criticised the previous government’s energy reform of opening up the market to private companies for the first time in eight decades.

Mexico held its first clean energy tender in 2015. Previously, wind farm operators were reliant on selling electricity to corporate and industrial off-takers.

Gaylord said that 2019 should be a "record year" for wind power installations in Mexico due to previously contracted projects.



15 February 2019

However, the clean energy auction's cancellation was likely to have a "major chilling effect" on wind power development in Mexico, he added.

In a tweet, Gaylord added that without the clean energy tenders, it was "impossible to imagine an alternative that doesn't result in higher electricity rates for Mexicans".

He had previously said it was "understandable" that the new administration would suspend the auction while it took time to review the tender's scope and objectives.

EDF, Engie, Enel, Invenegy, Iberdrola and Neoen were among the developers pre-qualified to compete in the tender.

An Iberdrola Mexico spokesperson said: "Iberdrola understands and respects the Mexican Government's initiative to review the process for capacity auctions and analyze whether or not they should be maintained in their current form.

"After four years of energy reform, we believe that tendering processes should be streamlined to become more efficient if they are to meet the country's increasing electricity demands.

"Iberdrola's flexibility and expertise will contribute to the modernization of Mexico's electricity system through whichever mechanisms the Government defines."

Wind and solar PV had dominated Mexico's three previous clean energy tenders in 2015, 2016 and 2017.

Wind projects accounted for nearly 45% of all capacity awarded in Mexico's last auction in November 2017, with an average price of \$20.57/MWh – a 38% reduction from the \$33.47/MWh average bid in September 2016.

Gaylord added: "They had such a great thing going with these auctions – especially the pricing of it – and there were no scandals (in development).

"It's really unfortunate."

Obrador, the leader of the left-wing National Regeneration Movement, was elected in July, and now heads a coalition government.

He has promised a radical new Mexico and has criticised his predecessors' economic policies of privatisation.

Windpower Monthly
<http://www.windpowermonthly.com>

4 February 2019

Swansea tidal lagoon plan revived – without government funding

Firm hopes to build scheme within six years after ministers rejected it for being too costly

The backers of a pioneering project to harness energy from the tides off the Welsh coast have rebooted the scheme and believe they can build it without the help of government. With the recent failure of two major nuclear projects, attention has turned to alternatives to fill the low-carbon power gap, with developers of windfarms and small nuclear plants among those vying for government support.

Now the firm behind the proposed Swansea tidal lagoon, for which ministers rejected subsidies last year on the grounds it was too costly, has said it believes the project can work without government money and be built within six years.



15 February 2019

Swansea-based Tidal Power plc said several major companies were interested in buying the low-carbon electricity generated by the tide flowing through turbines in a concrete wall along Swansea bay. Property company Land Securities, Cardiff airport and developer Berkeley Group are among those to have expressed an interest in signing a power purchase agreement (PPA) with the lagoon.

Such PPA deals are typically used by big energy users as a way of hedging against future power price rises, or burnishing green credentials by buying from renewable sources. A record 13.4 gigawatts of clean energy contracts were signed last year, according to BloombergNEF.

The lagoon's backers also believe its prospects will be boosted by adding floating solar panels to the lagoon, ramping up the amount of electricity it generates. UK water companies have already used floating solar power on reservoirs in Manchester, near Heathrow and elsewhere.

The addition of solar should increase the Swansea lagoon's annual energy output by more than a third, up from 572 gigawatt hours, enough to power about 150,000 homes, to about 770GWh.

Chris Nutt, the business development manager at Tidal Power, said: "It is becoming widely understood that there is a huge hole left in our long-term energy demands and after the latest cancellation of expected new nuclear capacity our choices if anything have become simpler – saturate the UK coastline with offshore wind or invest in groundbreaking solutions like Swansea Bay." The company is sounding out big energy users, including leading brands in the professional services, telecoms, media, manufacturing, services and utilities sectors.

The plan is to secure enough signed PPAs by the end of the year to enable a final investment decision in early 2020, with construction starting shortly afterwards. If that timetable were met, the project would be generating power in 2024 or 2025.

Going ahead without subsidies would be a rarity for a new power station in the UK, almost all of which rely on some form of government contract or subsidy before being greenlit.

Advocates of the project have said the predictability of the tides could be useful as nuclear falters and variable sources such as solar and wind power grow. But government has been skeptical. The business secretary, Greg Clark, told parliament recently: "No one is more enthusiastic than I about innovation and new technologies, but the truth is that the costs of the proposed [Swansea] project were three times that of Hinkley Point C, and a full programme [of several lagoons] would make a tiny contribution to our energy supply for a much greater cost."

The Guardian
<http://www.theguardian.com>

6 February 2019

Pilot project from TenneT and Daimler: Automobile battery storage systems stabilise the power grid

- ✓ *Successful development partnership between transmission system operator TenneT and Mercedes-Benz Energy, a wholly owned subsidiary of Daimler*



15 February 2019

- ✓ *Project partners have proven in the Kamenz test lab: Automobile battery storage systems can perform the job of system stabilisation for large-scale power plants*
- ✓ *Innovative energy storage solutions make an important contribution towards the energy transition*

Transmission system operator TenneT and Daimler AG through its wholly owned subsidiary Mercedes-Benz Energy GmbH have researched and tested the feasibility of innovative system services in the transmission grid as part of a joint development partnership. The results are groundbreaking: Automobile battery storage systems can take over tasks from large-scale power plants and make a significant contribution towards power grid stabilisation and system recovery.

The joint study was carried out within the framework of the Enera project as part of the “Smart Energy Showcases – Digital Agenda for the Energy Transition” (SINTEG) funding programme by the German Federal Ministry for Economic Affairs and Energy. The project partners have shown that automobile battery storage systems that use a lithium-ion basis can be used for highly dynamic system support and system recovery – specifically for a black start in power plants and to support mass inertia. Ultimately, this can help to compensate for the loss of conventional energy generation.

For the development partnership, the prototype of a battery storage system made up of automotive batteries with a total connected load of approx. 1 megawatt (MW) and a storage capacity of 750 kilowatt hours (kWh) was installed at the test centre in Kamenz. These are second-life and replacement batteries.

Electricity production is becoming considerably more volatile due to the increasing in-feed of weather-dependent forms of renewable energy. In the power grid, generation and consumption need to be balanced in order to maintain a frequency of 50 Hertz. If this is not the case, frequency deviations can occur. The masses of large-scale power plants, which rotate in synchronisation with the grid frequency of 50 Hertz, ensure that these fluctuations are dampened so that the system responds to these deviations in a more inert way. This is important, as frequency deviations can only be compensated with a delay through primary balancing power. Without the inert masses in the grid, the frequency would change so quickly that no compensation through balancing power would be possible. This would lead to ever-greater frequency deviations, which in the worst-case scenario could cause power failures. At the Mercedes-Benz Energy test lab in Kamenz, the project partners have now shown that automobile battery storage systems can respond to a changing frequency in less than 100 milliseconds. This means they can replace the inert masses in large-scale power plants.

The project partners have also shown that battery storage systems can be used to start up energy generating assets and even entire power stations, for example after a large-scale power failure. Today, diesel power units are used to restart turbines in power stations (rotating masses) and supply power to auxiliary units. The development study shows that this can also be done with battery storage systems – with virtually no losses and in a process that is much better for the environment. The energy storage system acts as a kind of “starter battery for the energy supply” and restarts the inert rotating masses of a power station. The necessary energy, around two to four percent of the rated capacity of a power station, is retrieved from the energy storage system if needed. To prove this, the project partners constructed a test grid in Kamenz and restored it after a simulated power failure using the automobile battery storage system.



15 February 2019

In the next phase of the development partnership, the project partners will work together to define the requirements that will enable a tender process for the future system service by TenneT.

TenneT

<http://www.tennet.eu>

7 February 2019

Eskom to be split into 3 different entities

Power utility Eskom is in crisis, according to president Cyril Ramaphosa, and it needs to completely restructure its business model. While delivering his state of the nation address on Thursday, Ramaphosa said that government will initiate a plan to split Eskom's business into three separate entities, as expected, which will operate as Eskom Holdings. The business will focus on generation, transmission and distribution, he said. According to the president, Eskom has come up with a nine-point turnaround plan which is supported by government. "In line with this plan, Eskom will need to take urgent steps to significantly reduce its costs. It will need more revenue through an affordable tariff increase," he said.

Steps also need to be taken to reduce municipal non-payment and confront the culture of non-payment that exists in some communities. "It is imperative that all those who use electricity – over and above the free basic electricity provided – should pay for it." Government will also support Eskom's balance sheet, and the minister of finance will provide further details on this in the Budget Speech. "This we will do without burdening the fiscus with unmanageable debt," Ramaphosa said.

New business model

"To ensure the credibility of the turnaround plan and avoid a similar financial crisis in a few years' time, Eskom will need to develop a new business model. "This business model needs to take into account the root causes of its current crisis and the profound international and local changes in the relative costs, and market penetration of energy resources, especially clean technologies," the president said. "To bring credibility to the turnaround and to position South Africa's power sector for the future, we shall immediately embark on a process of establishing three separate entities – Generation, Transmission and Distribution – under Eskom Holdings. This will ensure that we isolate cost and give responsibility to each appropriate entity. This will also enable Eskom to be able to raise funding for its various operations much easily from funders and the market," Ramaphosa said. "Of particular and immediate importance is the entity to manage an independent state-owned transmission grid combined with the systems operator and power planning, procurement and buying functions. It is imperative that we undertake these measures without delay to stabilise Eskom's finances, ensure security of electricity supply, and establish the basis for long-term sustainability," he said.

BusinessTech

<http://businesstech.co.za>

7 February 2019

EDF Energy to end power generation at Cottam coal plant in Britain

EDF Energy, part of French utility EDF, will cease power generation at its Cottam coal-fired power plant in Nottinghamshire, Britain, on Sept. 30, as it will no longer be



15 February 2019

economically viable to run, the company said on Thursday. The 2-gigawatt (GW) plant has been running for more than 50 years, but was designed to operate for 30 when it was built.

“Today’s decision reflects the challenging market conditions over the last few years and the context of the drive to decarbonise electricity generation,” it said in a statement.

EDF Energy said it will support its 158 workers at the Cottam plant through the closure process. In 2017, it helped 19 people to move to alternative roles within the company and a further 22 will be moving into other roles in the coming months.

EDF Energy operates the Cottam and the 2-GW West Burton A coal power stations in north Nottinghamshire. West Burton A has power capacity agreements in place for three of its four units until the end of Sept. 2021, which pay energy suppliers to ensure there is enough electricity generation capacity to meet peak demand.

“EDF Energy is committed to honouring these agreements and will review the future of that station beyond that date,” the company said.

Reuters

<http://uk.reuters.com>

8 February 2019

Residential solar+storage breaks new ground as Sunrun wins ISO-NE capacity contract

Independent System Operator-New England (ISO-NE) on Monday became the first capacity market to accept an aggregated residential solar-plus-storage bid, awarding Sunrun for 20 MW of distributed grid capacity to be online in 2022.

The contract is relatively small, but it represents enough solar and storage systems for about 5,000 homes, subject to change based on adjustments in battery sizing over the next three years, according to Chris Rauscher, Sunrun's policy and storage market strategy director. Besides bidding in at competitive prices, Sunrun's storage component provides direct backup power to customers, increasing the grid's resilience.

Utility Dive

<http://www.utilitydive.com>

11 February 2019

Hybridge to couple energy sectors

Last summer, TSCNET shareholder Amprion, one of the four German transmission system operators (TSOs) for electricity, and Open Grid Europe (OGE), German TSO for natural gas, announced a collaboration in the field of sector coupling by means of power to gas (PtG) facilities. PtG technologies offer promising perspectives for a low-carbon energy future. Now the two partners are ready to launch the sector coupling at system level in Germany with the project “hybridge” comprising an electrolyser in the 100MW class and a hydrogen infrastructure.

At a joint press conference on 11 February in the German capital of Berlin, the current status of hybridge and further steps were presented. Since the partners, who estimate the costs for the entire project at €150m, are ready to enter the approval phase, Dr. Klaus Kleinekorte, CTO at Amprion, explained that the regulatory framework must now be set up quickly. The more so, as it is crucial for the German climate targets that PtG is available in the GW range from 2030. “The ball is in the court of politics. If the course is set now, the plant can already go into operation in 2023,” commented Dr. Kleinekorte.



15 February 2019

The ideal location for the first PtG plant in the projected size, in which electricity from renewable energies is converted into green hydrogen and partly further into green methane via an electrolyser, was found at an intersection between the Amprion and OGE grids in the district of Emsland in the northwest of the German federal state of Lower Saxony. The regional natural gas storage facilities, which can be converted to hydrogen in the future, also contribute to optimal conditions for the development of a hydrogen grid to complement the 100MW electrolyser.

Amprion and OGE intend to further develop an existing OGE pipeline for the exclusive transport of hydrogen. The concept of Amprion and OGE for sector coupling at system level also includes non-discriminatory third-party access for all market participants to the planned grid coupling infrastructure.

TSCNET Services
<http://www.tscnet.eu>

12 February 2019

Tanzania and Kenya plan to start power interconnector project in 2020

State-run power utility Tanzania Electric Supply Company (TanESCO) has confirmed plans to connect the Kenya-Tanzania power interconnection project to the Southern Africa Power Pool (SAPP) via a 400 kV transmission line. Meanwhile, the power line will also be linked to the Eastern African Power Pool (EAPP) countries (Ethiopia) via the Kenyan network and Zambia via Tanzania.

The interconnector will entail a double-circuit overhead line. It will span across 510 km and will start from the Isinya station (Kenya) to Arusha (Tanzania). From there, the line will continue through the Tanzanian territory and will connect with Singida through Babati. Scheduled for operation in 2020, it will enable the two countries to exchange power easily and reduce their respective operational costs as modern sub-stations will be built to ensure increased effectiveness of power trade.

In 2016, the African Development Bank (AfDB) and the Japan International Cooperation Agency (JICA) approved a US\$259m loan to TanESCO for the development of the project.

The Tanzania government is also considering a 200 kV transmission line between Mwanza (Tanzania) and Masaka (Uganda) and interconnections with Mozambique, Rwanda, Burundi, and Malawi.

Enerdata
<http://www.enerdata.net>