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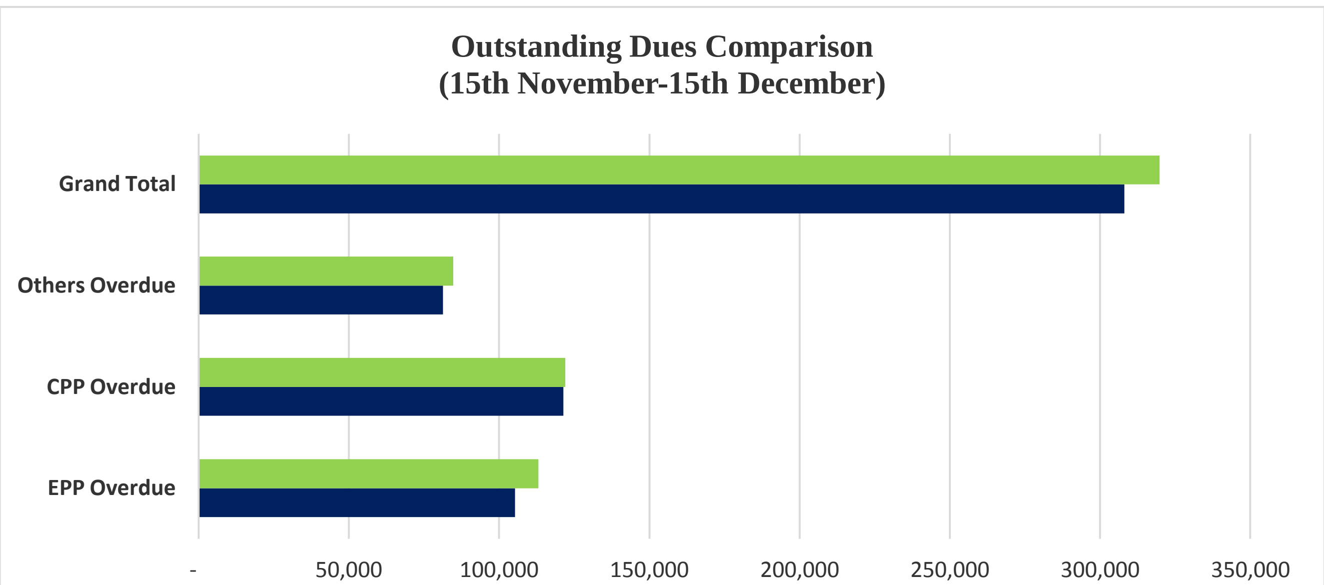
INDEPENDENT POWER PRODUCERS ASSOCIATION

MONTHLY NEWSLETTER

Welcome to the thirty-fourth edition of Independent Power Producers Association (IPPA) monthly Newsletter. The newsletter is published on a monthly basis to ensure regular dissemination of information to Member IPPs and other stakeholders, and also to provide a platform to discuss issues pertinent to the energy sector of Pakistan. We would like you to send us your feedback and comments on how to improve the monthly newsletter.

Monthly Infographics

Outstanding Dues as of 15th December, 2019 in PKR Millions

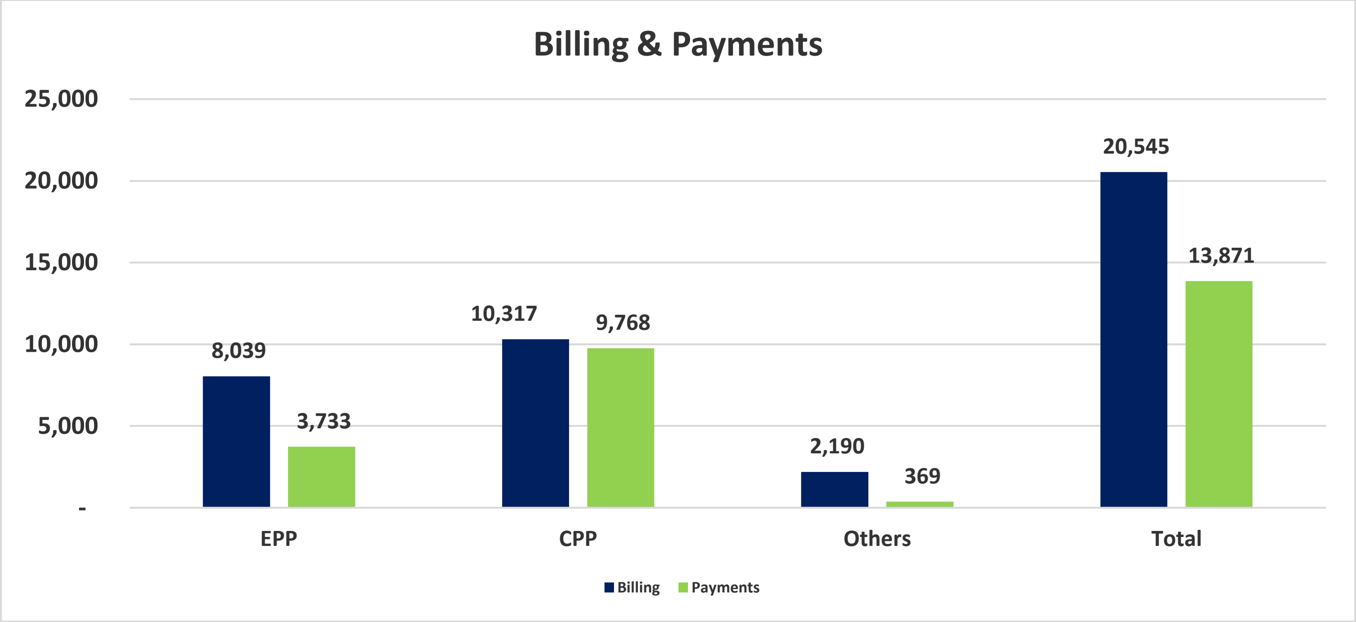


	EPP Overdue	CPP Overdue	Others Overdue	Grand Total
December	113,058	121,998	84,700	319,756
November	105,344	121,365	81,367	308,076

Source: Member and Subsidiary IPPs

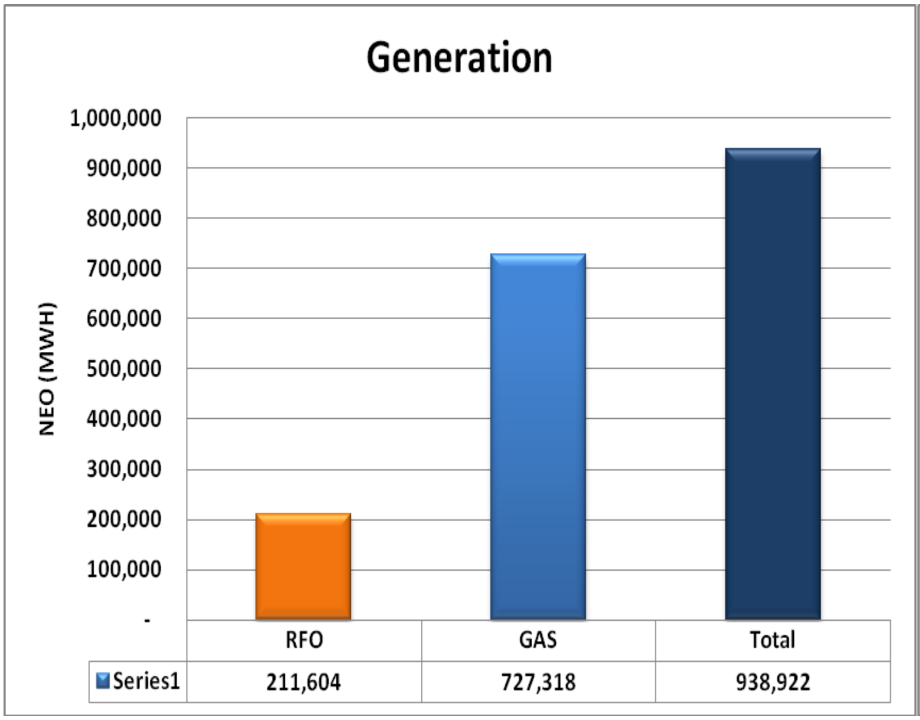
Monthly Infographics

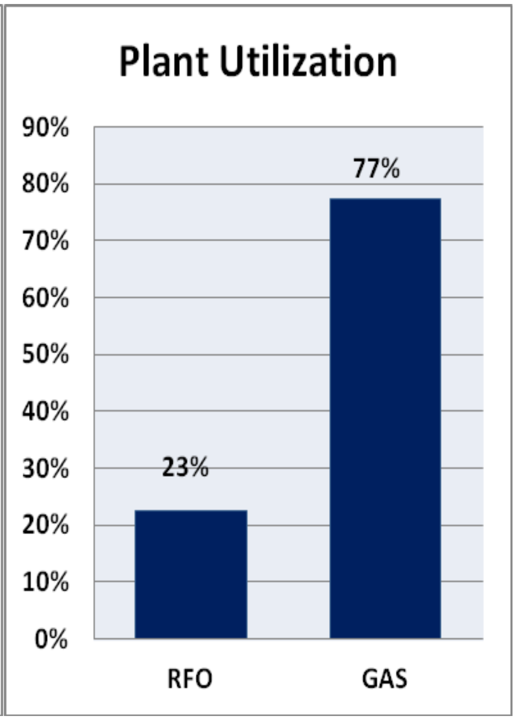
Billing and Payments in December 2019 in PKR Millions



Source: Member and Subsidiary IPPs

Net Generation and Plant Utilization in December, 2019





Source: Member and Subsidiary IPPs

Financial close achieved for 1,980MW Sindh power plants

Dawn News/02-01-2020

KARACHI: The financial close of the 1,320 megawatts (MW) power plant in Block-I, expansion of Block-II for installation of another 660MW power plant are milestones in development of Thar coal towards achieving energy self sufficiency for the country, said Sindh Chief Minister Syed Murad Ali Shah. Speaking at the Conference on Public Announcement Financial Close of two Mines on Wednesday, he said that with the financial close, $1.301 billion would be invested in Thar for generation of 1,980MW electricity and development of two coalmines with production of 10.6 million tones per annum (mtpa). It may be noted that Sino Sindh Resources limited, a Chinese company, has achieved a financial close of $1.06bn for development of 7.8mtpa coal mine in Block-I of Thar coalfields. The mine will supply coal to 1,320MW coal-fired power plant and fetch $2bn in foreign direct investment.

PTI government revises up Tarbela project cost to Rs122.9b

The Express Tribune/07-01-2020

ISLAMABAD: The government approved six projects costing Rs216.4 billion, including four schemes that were being executed but their construction cost had jumped significantly due to ill-planning, scarcity of funds and flawed implementation strategies. Headed by Adviser to Prime Minister on Finance Dr Abdul Hafeez Shaikh, the Executive Committee of the National Economic Council (Ecnec) approved the schemes put forth by the Ministry of Planning, Development and Special Initiatives. Planning Minister Asad Umar also attended his first Ecnec meeting. Ecnec approved an increase in the cost of Tarbela 4th Extension hydroelectric power project to Rs122.9 billion, up Rs40.5 billion or nearly 50% within four years of the project’s execution. The Public Sector Development Programme (PSDP) is riddled with schemes that are facing years of delay. The factors contributing to the delay remain unaddressed, including a lack of fiscal resources. Like its predecessor, the Pakistan Tehreek-e-Insaf (PTI) government is approving new projects in meetings of the Central Development Working Party (CDWP) too frequently, which has significantly increased the number of total outstanding approved projects. The Tarbela 4th Extension project is aimed at increasing the project’s power generation capacity from 3,478 megawatts to 4,888MW by installing three units of 470MW each on the existing irrigation tunnel four. The World Bank is providing financing for the project.

Government approves merger of state-run LNG companies

Energy Update Magazine/07-01-2020

ISLAMABAD: In a new development, the federal government has approved merger of two state-run LNG companies — Pakistan LNG Terminal Limited (PLTL) and Pakistan LNG Limited (PLL). Both the companies dealing with LNG will be merged into single entity as autonomous body. According to a senior official, the new entity after the merger of the two companies will later be merged into Pakistan State Oil (PSO), as the government has not strong economic muscle to provide finances and run the newly amalgamated entity. Last year, Pakistan LNG Limited asked the government to provide $1 billion sovereign guarantee to run its operation relating to import the cargoes. The government wants, the official said, to handover on later stage the amalgamated entity to Pakistan State Oil (PSO) as it has economic muscle and does not need the government guarantee to run its operations. PSO is already running its operation from 2015 in the LNG business. According to the letter issued by Petroleum Division, signed by section officer Umer Saeed Khan, addressed to GHPL (Government Holding Private Limited) that the companies Act 2017 provides the procedure of amalgamation of two companies and as per Section 284 (2) (a) of the Companies Act 2017, the scheme of amalgamation is to be approved by resolution of the board of each amalgamating company.

KE CEO sees Rs 50 billion dues serious threat to power projects

Mushtaq Ghumman/Business Recorder/10-01-2020

KARACHI: Chief Executive Officer (CEO) Karachi Electric (KE), Moonis Alvi on Thursday said that the power utility's unpaid receivables are a serious threat to investments in power projects in Karachi. Talking exclusively with Business Recorder, he said that K-Electric has launched an appeal for the recovery of dues of more than Rs 50 billion, pending with the government of Sindh (GoS) and other provincial entities. The appeal has been made in the interest of the city of Karachi as the stuck-up receivables pose a serious threat to continuity and reliability of supply. Receivables from different departments of the GoS have increased to around PKR 19 billion. In addition, approximately PKR 32 billion are due from the Karachi Water & Sewerage Board (KWSB). “Our demand from the government of Sindh is based on the summary it filed in the Supreme Court of Pakistan in 2016. In the summary, the Sindh government had submitted that it would start making monthly payments on behalf of KWSB against current bills and devises a payment schedule for the outstanding dues of KWSB. We have reconciled approximately PKR 28 billion with KWSB and are demanding reconciliation of the remaining amount. No payment plan has been conveyed to us so far," he added.

PPA of Neelum Jhelum Hydropower Project Signed

Energy Update Magazine/10-01-2020

ISLAMABAD: A tripartite Interim Power Purchase Agreement (PPA) of Neelum Jhelum Hydropower Project (NJHPP) was signed today among Central Power Purchasing Agency (Guarantee) Limited (CPPAG), Neelum Jhelum Hydropower Company Limited (NJHPCL) and Water and Power Development Authority (WAPDA) for purchase of power from NJHPCL. The agreement was signed by CPPAG CEO Abid Latif Lodhi, NJHPC CEO Engineer Brigadier (Retd) Muhammad Zareen and WAPDA Member (Power) Javed Akhter on behalf of their respective organizations. With the signing of PPA, NJHPCL will be able to raise invoices on account of energy delivered to National Grid with effect from July 4, 2018 which is more than 6.3 billion units of electricity up till now, translating into financial gains of Rs.57 billion. All four units of Neelum Jhelum Power House are operational and generating electricity according to availability of water.

HUBCO likely to carve out two units from PPA

Mushtaq Ghumman/Business Recorder/13-01-2020

ISLAMABAD: M/s Hub Power Company (Hubco) is likely to carve out two units of the Hub plant from the Power Purchase Agreement (PPA) and novate them to Karachi Electric (KE), well-informed sources told Business Recorder. M/s Hubco has written a letter to CPPA-G regarding conversion of two Residual Fuel Oil (RFO) based units of Hub plant to coal. The power company approached K-Electric for the off-take of power from the converted units as a result KE would be able to replace its inefficient capacity with much more economical power supply from Hubco. The sources said National Electric Power Regulatory Authority (Nepra) and CPPA-G, a subsidiary of Power Division are looking into the offer of Hubco to KE. The coal conversion of two units of Hubco (2×323 MW) would be running for 8 months in non-winter months, with total tariff including incremental EPP and CPP of approximately $ 6 cents per unit, displacing the engine based RFO IPPs (Narowal, Atlas, Liberty, Nishat etc) with an EPP of approximately 9 cents per unit, resulting in annual savings of approximately Rs 14 billion for GoP. The total CPP of the converted units for remaining four months would be around Rs 4 billion which would result in estimated net annual savings of Rs 10 billion for GoP. M/s Hubco had also submitted a plan to the government to convert furnace oil-fired plant into a coal-fired power plant prior to expiry of Power Purchase Agreement (PPA) in 2027. Hub Power Plant is an RFO-fired thermal power plant, situated at Hubco in Balochistan. The plant was built in 1997 with a Power Purchase Agreement (PPA) of 30 years and supplies 1200MW (net) electricity to the national grid

Govt generates Rs229bn additional revenue from Discos

Abdul Rasheed Azad/Business Recorder/11-01-2020

ISLAMABAD: Federal Secretary Power Division Irfan Ali has said that the government generated overall additional revenue of Rs. 229 billion from the distribution companies (DISCOs) in between October 2018 to October 2019. While briefing the subcommittee of the Public Accounts Committee, which met here under the chairmanship of Senator Shibli Faraz, Irfan Ali said that as a result of improvement in recovery mechanism, the government over the period has made Rs 229 billion additional recoveries from various consumers of which Rs 118 billion additional revenue has been generated by increasing power tariff and Rs 111 billion by capacity building of the power distribution companies. The official of the Power Division briefed the committee regarding overall losses in all DISCOs and exploring the cheaper sources of power generation including renewable energy under Power Division in the light of discussion made in the previous meeting. The committee was informed that there was no load shedding in areas where people are paying bills. The sub-committee directed Power Division, Ministry of Energy, to conduct evaluation of all electricity distribution companies (DISCOs) at the earliest. The secretary Power Division informed the panel that from October 2018 to October 2019, the government registered over 52,000 first information reports (FIRs) against power thieves and 7,300 people were arrested on account of electricity theft.

Minister tells NA: Saudi co to invest $4bn in renewable Energy Sector

Business Recorder/14-01-2020

ISLAMABAD: Minister for Power Division Omar Ayub Khan on Monday informed the National Assembly that a Saudi power producing company, ACWA Power, would invest around $4 billion in the country’s renewable energy sector. He said that generation of cheap electricity utilizing indigenous renewable energy resources including wind, solar, waste to energy biomass is amongst the top priorities of the government. He said Alternative Energy Development Board (AEDB) had been pursuing the development of alternative and renewable energy-based power generation projects through private investors under the Renewable Energy Policy 2006 on IPP mode.

Significant progress had been made in exploiting the wind, solar and biomass/bagasse potential available in the country and several power generation projects based on these resources are operational and many are in the pipeline, he added. The minister further reiterated the incumbent government's enthusiasm in diversifying the generation mix by increasing the share of alternative energy up to a level of 20 percent by 2025 and 30 percent by 2030. Thus, in order to execute the drafted objectives, the government has formulated a new Alternative Renewable Energy Policy 2019 that has been approved by the cabinet and submitted for approval from CCI.

Power generation: Is FO coming back?

Business Recorder/16-01-2020

From its share in power generation in the previous years to its high price as a fuel cost and its repercussions on the environment, furnace oil has been a troublemaker. It started when the furnace oil started being replaced in the power generation mix by coal and RLNG, and it made sense, as the expensive furnace oil was no longer feasible relative to the imported RLNG and new coal power plants coming online. The curtailment gave a breather to petroleum imports. However, it is also when furnace oil started wreaking crisis after crisis and the refineries a run good for their money. Refineries in Pakistan run on hydro-skimming technology, where the percentage of FO production is much more than in a system of deep conversion refineries that produces more of the other value added petroleum products. Apart from the regular winter crisis where domestic off-take came under threat due to lower power demand, FO curtailment's adverse effects on the downstream oil and gas sector have taken up a notch with the IMO 2020 Regulations that has resulted is spiraling down of furnace oil prices. With no recovery insight for prices, FO is a threat to the downstream oil sector.

NEECA Launches Minimum Energy Performance Standards

Energy Update Magazine/17-01-2020

ISLAMABAD: The National Energy Efficiency and Conservation Authority (NEECA) on Wednesday launched Minimum Energy Performance Standards (MEPS) delivering the Transition to energy efficient lighting residential, commercial industrial and outdoor sectors in Pakistan The National Energy Efficiency and Conservation Authority (NEECA) on Wednesday launched Minimum Energy Performance Standards (MEPS) delivering the Transition to energy efficient lighting residential, commercial industrial and outdoor sectors in Pakistan. The project aimed at mitigating the green house effect besides developing a national efficient lighting strategy. It is pertinent to mention here that the Global Environment Facility (GEF) approved the project titled "delivering the Transition to energy efficient lighting residential, commercial industrial and outdoor sectors in Pakistan". The project has been jointly developed by UNEP and NEECA.

Senate passes "Regulation of Generation, Transmission & Distribution of Electric Power Amendment Bill 2019"

Sardar Sikander/Business Recorder/21-01-2020

ISLAMABAD: The Upper House of the Parliament on Monday unanimously passed 'the Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Bill, 2019,' a private member bill moved by Leader of the House in Senate Shibli Faraz, which seeks to grant the provinces the powers to nominate their representatives in National Electric Power Regulatory Authority (Nepra) without requiring the federal government's approval. During the Senate's session presided over by chairman Sadiq Sanjrani, Faraz presented the bill, which has already been passed by the relevant Senate standing committee. During voting on the bill, no one from the opposition benches opposed the bill leading to its unanimous passage. The bill would now land in the National Assembly seeking the Lower House's nod before seeking the ascent of the President of Pakistan in order to become a law. The Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Bill 2019 seeks to amend the Section 3 (1) of the Generation, Transmission and Distribution of Electric Power Act 1997. The amended Section 3 (1) reads as: "Establishment of the Authority. - (1) As soon as may be, but not later than thirty days after the commencement of this Act, the federal government shall, by notification in the official gazette, establish a National Electric Power Regulatory Authority consisting of a Chairman to be appointed by the Federal Government and four members, one from each province, to be appointed by the provincial governments."

Punjab power generation policy in final stage

The Express Tribune/22-01-2020

MULTAN: Punjab Minister for Energy Dr. Akhtar Malik said on Tuesday that the Punjab Power Generation Policy is in the final stage. Addressing a meeting, the minister said the Punjab Solarization Programme was being completed on a war footing. Mentioning the achievements of the energy department during last year, he said a seven-megawatt (MW) hydroelectric power project was established at Marala. He said that action was being taken indiscriminately against power theft. Power projects run on biogas were being launched in villages and basic health units across Punjab were being shifted to solar power, he added.

The energy minister said the provincial government had converted thousands of schools in villages and remote places across the province to solar technology. Dr. Malik said a technical school to train students in state of the art power technology and its use had been opened in Sahiwal. The minister expressed the resolve to provide cheaper and environment-friendly electricity to consumers.

NEPRA awards generation licenses to two solar power plants

Energy Update Magazine/26-01-2020

KARACHI: The National Electric Power Regulatory Authority (NEPRA) has awarded generation licenses to two solar power plants being setup in Baluchistan with a cumulative generation capacity of 112.2MW, a statement said on Saturday. Licenses have been given to P&G Energy (Private) Limited, a subsidiary of of Vogt GmbH Germany, for its 62.2MW solar power plant in Gwadar; and Enertech Boston Solar (Private) Limited, a subsidiary of Kuwait-based Enertech Holding Company Limited, for its 50MW solar power plant in Pishin. According to NEPRA, the proposed projects will result in optimum utilisation of the renewable energy in Baluchistan, which is untapped, resulting in pollution-free power. “It is pertinent to mention that solar is an indigenous RE resource and such resources should have a preference for the energy security. There is a global trend of reduction in the prices of PV Cells, which results in lower tariffs as is evident from various determinations of the authority,” NEPRA noted in its determination “These lower tariffs will result in reduction of the overall basket price, which will be beneficial to the public at large.”

12 firms pre-qualify to bid for power plants

Shahbaz Rana/Business Recorder/29-01-2020

ISLAMABAD: The Privatisation Commission board on Tuesday pre-qualified 12 firms to bid for multi-billion dollar power plants and approved to hire financial advisers to sell stakes of Pakistan’s two blue-chip firms aimed at rising around Rs400 billion to meet the budget deficit reduction target. Headed by the privatisation minister, the PC Board pre-qualified all 12 parties that had submitted statements of qualifications for the acquisition of two LNG-fired power plants. Investors from Japan, Thailand, the United Kingdom, Malaysia, and Pakistan have submitted documents. A few renowned global parties have also shown interest in acquiring the power plants. The National Power Parks Management Company Limited (NPPMCL) owns the two power plants located at Balloki and Haveli Bahadur Shah, which have a combined generation capacity of 2,453 megawatts. The government wants to sell NPPMCL in the hopes of fetching a minimum of Rs300 billion or $1.5 billion in non-tax revenue. The board has prequalified all the 12 parties and now these companies will start due diligence process, Privatization Secretary Rizwan Malik told The Express Tribune.

330MW Thar coal achieves financial closing

Business Recorder/31-01-2020

ISLAMABAD: Hub Power Company's 330MW Thar coal-fired power plant achieved financial closing on Thursday, signing of which was witnessed by the Minister for Power, Omar Ayub Khan, with other senior officials of Power Division, PPIB and the company. The financial closing documents for the 330MW mine mouth lignite coal power project at Thar Block-II were signed by managing director PPIB Shah Jahan Mirza, and chief executive officer (CEO) of M/s Thar Energy Limited Saleemullah Memon. Earlier, the Implementation Agreement (IA) was signed on November 10, 2017. M/s Hubco, Fauji Fertilizer Limited and China Machinery and Engineering Corporation are jointly sponsoring the project under the China-Pakistan Economic Corridor (CPEC) framework. The total cost of the project is $ 497 million while China Development Bank and Habib Bank Limited are the lead lenders. The project will utilize Thar coal supplied by Sindh Engro Coal Mining Company (SECMC) from its second phase mine and after implementation of this project overall coal price (SECMC) would be reduced from $64/ton to $44/ton, which will significantly reduce the power tariff by cents 1.6/KWh (ie, around Rs 2/KWh). After commercial operation of the project, around Rs 18 billion per year would be saved on account of foreign exchange while Rs 260 billion per year would be saved by year 2022 when all Thar coal based projects of 5,000MW would be operational. As a result, electricity tariff would be reduced to around cents 5/KWh.

UK could tap into Africa's $24bn market for off-grid solar power

The Guardian/21-01-2020

LONDON: UK investors could seize a $24bn investment opportunity by helping to connect millions of people without access to electricity to off-grid home solar power systems. The market for pay-as-you-go home solar packages is expected to boom in Africa, where millions of homes are using mobile technology to rent low-cost solar panels. UK companies have played a leading role in helping more than five million households sign up to pay-as-you-go home solar systems in the past four years. But with 600 million people without access to an electricity grid, there is huge potential for future investment. A report by Kleos Advisory, published during the first UK-Africa Investment Summit in London, has found that the commercial opportunity from off-grid solar panels could generate about $24bn (£18bn) a year. The market is growing rapidly since the collapse in the cost of solar panel technologies and the emergence of mobile banking and affordable financing in the continent's fast-growing economies. Households that earn an income are increasingly using mobile phones to rent small-scale solar panels, and ultra-efficient electric lighting strips and appliances to access electricity for the first time. Once the solar panels are paid off, households own the equipment outright and in effect have free energy. Many then choose to upgrade their packages to add televisions and electric cookers. The off-grid solar market is expected to grow rapidly, in part because eight of the world's 15 fastest-growing economies are in Africa. Tedd George, the author of the report, said the combination of solar technology and affordable financing was "driving an economic transformation in Africa, making the 'unbankable' bankable and embedding African consumers in the digital economy".

U.S. clean energy investment hits new record despite Trump administration views

Reuters/16-01-2020

LONDON: Clean energy investment in the United States surged to a fresh record of $55.5 billion last year, despite the government's attempts to roll back supportive policies, a report showed on Thursday. As renewable energy costs have plunged and onshore wind and solar developers rushed to qualify for tax credits before they are scaled back this year, investment surged 28% from a year earlier, a report by Bloomberg New Energy Finance (BNEF) said. Additionally, a jump in financing for offshore wind along with the investment surge, helped to offset a decline in investment in the world's biggest market, China. The U.S. wind power tax credit has seen its value drop since 2017 and was scheduled to be phased out completely by this year The wind power tax credit is currently worth 1.5 cents for every kilowatt-hour of electricity produced. The credit's value began dropping in 2017 and was schedule to be phased out completely next year. Global renewable energy capacity investment inched up by 1% to $282.2 billion last year. "It's notable that in this third year of the Trump presidency, which has not been particularly supportive of renewables, U.S. clean energy investment set a new record by a country mile," said Ethan Zindler, head of Americas at BNEF. "These technologies are more cost-competitive than ever, and the fact that there was a tax credit step-down on the horizon made the market particularly busy in 2019," he added. Indeed, President Donald Trump's withdrawal of federal support for Obama-era climate goals indirectly helped the industry here by inspiring a backlash among U.S. cities, states and corporations, which have grown more ambitious about installing cleaner forms of energy. Although China is still the biggest investor in renewables, the amount declined by 8% to $83.4 billion last year. In the second half of the year there was a surge in offshore wind financing which took investment in that sector to $29.9 billion, a new record and 19% higher than a year earlier, the report said.

Qatar to build solar power plant with Total and Marubeni

Reuters/19-01-2020

DOHA: Qatar has signed an agreement with France's Total and Japan's Marubeni to build a solar power project with capacity of about 800 megawatts (MW), Qatar's energy minister said on Sunday. The cost of the project is about 1.7 billion riyals ($467 million), Saad al-Kaabi, who is also chief executive of Qatar Petroleum (QP), told a news conference in Doha. Qatar's Siraj Energy, a joint venture owned by QP and Qatar Electricity and Water Company (QEWC), will hold a 60% stake in the solar plant. While, the remaining 40% of the stake would be own by both Marubeni and Total. CEO Kaabi said that Qatar, the world's largest supplier of liquefied natural gas (LNG), plans more solar projects as the country aims to reduce carbon emissions and minimise its impact on the environment. In October Kaabi said that Qatar had commissioned a carbon capture and storage plant and aims to sequester 5 million tones of carbon from its LNG operations by 2025.

Work starts on world's 'largest offshore wind farm' that could power 4.5 million homes

CNBC/17-01-2020

ULROME: Construction work for a huge offshore wind farm in the North Sea is underway. In an announcement Friday, energy firm SSE said that onshore work for the 3.6 gigawatt (GW) Dogger Bank Wind Farms project had begun near Ulrome, a coastal village in the East Riding of Yorkshire, England. Dogger Bank Wind Farms – which SSE described as "the world's largest offshore wind farm" – will be made up of three 1.2 GW offshore sites: Creyke Beck A, Creyke Beck B and Teesside A. The project is a joint venture between SSE Renewables and Norwegian energy major Equinor. Jones Bros Civil Engineering U.K., a firm headquartered in North Wales, is carrying out the construction work. The scheme is set to use GE's Haliade-X wind turbine, which has a 12-megawatt generator and stands 260 meters tall. According to SSE, the project will have the capability to produce enough renewable energy for more than 4.5 million homes per year. The U.K. is a major player in the offshore wind sector. It is home to projects such as the 659-megawatt Walney Extension facility, in the Irish Sea, which was officially opened in 2018. The scale of that project is considerable: it is capable of powering more than 590,000 homes, has 87 turbines and covers an area of around 20,000 soccer pitches, according to Danish energy company Orsted. Europe as a whole is home to a significant offshore wind sector. According to industry body WindEurope, 409 wind turbines were connected to the grid in 2018. The average size of offshore turbines in 2018 was 6.8 MW, which represents a 15% rise compared to 2017.

German government sets aside $50 billion for phase out of coal-fired power stations

CNBC/16-01-2020

Germany's federal government and the four German states where lignite – or brown coal – is mined have agreed to "a way forward" for the phase out of coal-fired power stations in the country. In an announcement Thursday, the federal government said it would provide 40 billion euros ($44.52 billion) to the federal states affected by the transition. In addition, operators of power plants will be provided with 4.35 billion euros across the next 15 years to compensate for the shutting down of their facilities. Energy firm RWE, which operates lignite-fired power stations in Germany, said it would get 2.6 billion euros in compensation, adding that over 3,000 jobs would have to be cut in the short term, with total job losses rising to around 6,000 by 2030. Shares in the firm were up by more than 2% on Thursday afternoon. The state premiers of Saxony-Anhalt, Saxony, North Rhine-Westphalia, and Brandenburg approved the agreement between federal and state authorities. It could potentially result in the phase out of using coal to produce power by 2035, authorities said, three years ahead of the government's original aim of 2038. While authorities in Germany want to move the country towards using more renewable sources of energy, fossil fuels still play a significant role in its mix. Lignite, for example, accounted for 22.5% of electricity production in 2018 while hard coal, or anthracite, was responsible for 12.9%, according to the Federal Ministry for Economic Affairs and Energy.

Zero-carbon electricity outstrips fossil fuels in Britain across 2019

The Guardian/01-01-2020

LONDON: Zero-carbon energy became Britain's largest electricity source in 2019, delivering nearly half the country's electrical power and for the first time outstripping generation by fossil fuels. Following a dramatic decline in coal-fired power and a rise in renewable and low-carbon energy, 2019 was the cleanest year for electrical energy on record for Britain, according to National Grid, which owns and operates the electricity transmission network in England and Wales, and also runs the Scottish networks. National Grid's latest data shows that wind farms, solar and nuclear energy, alongside energy imported by subsea cables, delivered 48.5% of Britain's electricity in 2019. This compares to 43% generated by fossil fuels – coal, gas, and other carbon sources such as oil and diesel. The remaining 8.5% was generated by biomass, such as wood pellets. This milestone comes as the UK enters the mid-point between 1990 and 2050, the year in which it has committed to achieve at least a 100% net reduction in greenhouse gas emissions based on 1990 levels, and to become a net zero carbon economy. A decade ago, fossil fuels generated more than three-quarters of all electricity, while zero-carbon sources accounted for less than a quarter (22.8%), with wind at 1.3%. Then, coal plants provided almost a third of the UK's electricity. This has dwindled to 1.9%, and Britain set a new record for going without coal-powered energy altogether in summer 2019.

India plans to mandate cyber security measures for power grids

The Economic Times/21-01-2020

NEW DELHI: India's electricity grid operators will have to install firewalls and other measures used by companies to avert an attack on their information technology systems and check rising hacking incidents of power networks across the world. Grid operators and regulatory agencies will need to have a continuity plan handy in the event of a cyber attack, according to draft rules published by the Central Electricity Regulatory Commission. The move is part of an overhaul of the decade-old guidelines. The report comes barely months after the nation's monopoly nuclear power producer admitted its information system had been breached, underscoring the need for more action to protect critical installations. Energy networks across the world have been key targets for hackers, prodding governments to take safeguard measures.

France to use batteries for Renewables Instead of Power Lines

Bloomberg/22-01-2020

PARIS: France's grid operator will test storing excess wind and solar power in batteries to reduce the need to build new transmission lines that involve heavy construction work and take longer to complete. Network operators across Europe are seeking ways to both minimize the cost and environmental impact of the energy transition. Reseau de Transport d'Electricite estimates that France will need to spend 33 billion euros ($37 billion) by 2035 to renovate the network, build new interconnectors and make the grid more flexible to accommodate an influx of wind and solar farms as the country reduces its reliance on nuclear power. The project consists of installing three batteries near wind farms, far enough apart so they can each store enough power to supply a city of 10,000 inhabitants for a few hours, said Oliver Grabette, RTE's head of solutions. When one of the batteries stores excess power production in a region, the other two will release the equivalent amount of electricity, so that the power market isn't affected by the grid operator's pilot project. The batteries will be tested from 2021 for about three years. They will then be used to help design the legal and technological framework to roll out similar power storage solutions elsewhere.

Coal Endures as World's Favorite Fuel for Electricity Generation

Bloomberg/04-01-2020

LONDON: Coal consumption is set to rise in the coming years as growing demand for electricity in developing countries outpaces a shift to cleaner sources of electricity in industrialized nations. While use of the most polluting fossil fuel had a historic dip in 2019, the International Energy Agency anticipates steady increases in the next five years. That means the world will face a significant challenge in meeting pledges to reduce greenhouse gas emissions that cause global warming. This year is on track for biggest decline ever for coal power, that's mostly due to high growth in hydroelectricity and relatively low electricity demand in India and China, said Carlos Fernandez Alvarez, senior energy analyst at the Paris-based IEA. Despite the drop, global coal consumption is likely to rise over the coming years, driven by demand in India, China, and Southeast Asia. Power generation from coal rose almost 2% in 2018 to reach an all-time high, remaining the world's largest source of electricity. The steady outlook for coal comes in spite of waning demand in industrialized nations. Europe has set a goal of zeroing out carbon pollution by the middle of the century, which would mean drastic reductions for coal. In the U.S., competition from natural gas has cut into demand for coal, despite President Donald Trump's vows to revive the industry. The story is different in Asia, which will more than make up for reductions elsewhere. India, with a population of more than 1.3 billion, will see coal generation increase by 4.6% a year through 2024 to help power its growing economy. In Southeast Asia coal demand will grow more than 5% annually. China, which accounts for almost half the world's consumption, will also have modest growth with usage peaking in 2022.

Intesa Sanpaolo CEO says ready to fund 50 billion euros in green investments

Bloomberg/24-01-2020

MILAN: Italy's biggest retail bank Intesa Sanpaolo is ready to fund 50 billion euros in green investments in Italy, Chief Executive Carlo Messina said on Thursday. The comment came after the European Union unveiled a plan on Tuesday for a trillion-euro push to cut net C02 emissions to zero by 2050 and protect member countries dependent on coal. "I think that 150 billion euros can be allocated in Italy. We are ready to fund 50 billion to support the green economy," Messina said during an event in Milan.

MONTHLY ACTIVITIES OF IPPA

IPPA held its Annual board meeting

IPPA held its Annual Board Meeting at Mansha House Building, Jail Road, Lahore. The meeting saw attendance from all board members. The agenda for the meeting included important restructuring decisions. At the end of the meeting, the participants thanked the chair of the meeting.

IPPA representatives participated in the first Meeting of National Network of Economic Think Tanks to discuss 'Better Business Regulatory Environment: Way forward for Pakistan

The round-table discussed the various regulatory challenges faced by a number of industries in Pakistan. The participants included representatives from the development sector such as World Bank, SDPI, USAID. Representatives from government included participation from Khyber Pakhtunkhwa Government and SECP. Meanwhile the private sector's opinion was presented by relevant employees of Telenor, Nestle and Amreli Steels. The stakeholder engagement started with Mr Vaqar from SDPI introducing the various parties in the meeting. The opening presentation was delivered by World Bank representative who presented current regulatory reforms underway with the government of Pakistan. Afterwards, various stakeholders presented their opinions for further development of the sector.

IPPA held a meeting with SDPI

IPPA's CEO Dr Fatima Khushnud held a meeting with her counterparts in SDPI. The delegation from SDPI included Mr Ahad Nazir and Miss Hina Faisal. The two sides discussed collaboration on a number of fronts including joint research and Industry Linkages. The participants also expressed satisfaction at the progress of past endeavors and broached collaboration on future research topics such as analyzing the political economy of coal.

IPPA participated in Pak LNG Conference

CEO IPPA Dr Fatima Khushnud along with other representatives participated in the One Day Powerful Energy Conference on LNG for Pakistan at Serena Hotel, Islamabad. The conference had official backing from Ministry of Energy. Mr. Nadeem Baber, special adviser to the prime minister on energy, apprised the attendees of the conference about the current state and future direction of the LNG market.

The conference was attended by representatives of Mitsubishi which is planning to operate an FSRU unit in Port Qasim, Karachi. Other attendees included VP Hanas, which presented the idea of virtual pipelines via transporting LNG on wheels. The meeting also attended by other government representatives such as Dr. Nawaz Ahmed Virk, Director LG, Petroleum Division Ministry of Energy and Mubin Saulat, MD, Inter State Gas Company.

As a Panelist on "Framework for LNG till 2030", Dr Fatima Khushnud informed the participants about the importance of LNG in the fuel mix for power sector. She expounded on the Clean and Green qualities of LNG and the role that it will play in emission control.

IPPA representatives attended the Launch Event of Report 'Pakistan's Electricity Outlook 2025" by LUMS Energy Institute

IPPA representatives attended the Launch of a report by Dr. Fiaz Chaudhry, Director LUMS Energy Institute. The report launch was followed by a Keynote Talk on 'Wireless Charging of Electric Vehicles' by Dr. Khurram Afridi, Associate Professor, Cornell University. The closed event facilitated knowledge transfer among industry stakeholders and helped students engender an interest in Wireless Charging via electric induction.

NATIONAL POWER POLICY: A VISION FOR THE FUTURE

The following discussion carries forward from previous news-letter which outlined necessary provisions for the creation of a sustainable National Power Policy. While part one discussed measures the discussion will be continued in subsequent Newsletter encompassing: Preparation for the Fourth Industrial Revolution, Solving the "missing money" problem through Capacity Markets and learning from past mistakes.

Preparing for the fourth industrial revolution

The Fourth Industrialization Revolution (FIR) would create tremendous opportunity in terms of automation. The magnitude of disruption for the Fourth Industrial Revolution is akin to that of the introduction of the steam train. Therefore, NEP needs to ensure that the power sector of Pakistan is ready to exploit this change for the greater good. FIR will be defined by 3Ds of Distributed Generation, Digitization and Decarbonization. Distributed generation will require capacity building1 exercises to give the ability to implement mini-grids and transactive energy. Furthermore, the government will have to create institutional capacity for standardization of equipment being used for distributed generation.

Digitization within FIR will include the implementation of the Internet of Things (IoT) within the power sector. IoT will stimulate automation potential along the lines of commoditization of production experience2. However, keeping Fifth Generation Warfare in mind, the implementation of IoT needs to ensure relevant cyber security standards that guarantee system security against hacking attempts. Therefore, NEP will have to engage stakeholders that ensure network security for the power sector. For starters, the policy can simply ape the framework from other developed countries[3] to get the ball rolling. Later on, these policies can be **adapted** to the national and provincial requirements.

Decarbonization will affect **generation** and **consumption**. On the consumption side, **decarbonization of transport sector** is expected to source its energy from electricity rather than hydrocarbons. Furthermore, renewable energy will also dominate the energy mix for power generation. While renewable energy generation will be beneficial in many ways; the sector needs to prepare for the transmission and life-cycle challenges brought on due to Variable Renewable Electricity.

Apart from the 3Ds, FIR would also see **servicification of economy** including the power sector. Therefore, a large portion of the Distributed Generation and IoT sector will be captured by these service providers. Hence, NEP has to cater for the incentive scheme and market-positive limitations on these service providers.

Preparation for the issue of Capacity Markets

Electricity Markets for the developed countries were established on the promise of no capacity payments and low electricity pricing. However, experience has shown that these electricity markets have failed to generate relevant ROE to warrant **reinvestment in increased capacity**. Such a situation, as a consequence, has forced governments to resume capacity payments in the form of **Capacity Markets**. The government needs to consider the Capacity Market Conundrum and come up with a localized solution **before** implementing the Electricity Market. Otherwise, NEP will be replacing one set of problems with another set of problems.

If NEP is successful in implementing the above-mentioned reforms it would fulfill its responsibility of preparing Pakistani Power Market for the future. However, NEP's liability does not end here. Any new policy needs to incorporate lessons of the past.

Learning from old mistakes

Unfortunately, history shows that previous policies have made a number of errors of design & implementation. One way to categorize them is: market, generation, transmission and distribution.

[1] Financial, legal and technical
[2] Through collection of data
[3] Preferably national security states

Market

The gravest mistake of the past policies has been the complete absence of measures to increase **efficiency of power consumption**. This strategy needs to be implemented on both industrial and consumer level[4]. A more efficient power sector would have a higher worth of value addition per KWh of energy generation. This extra value addition would promote demand increase in the long-run which, in-turn, will lead to demand creation[5].

On the financing side, institutions have failed to promote a bond market for the country. Corporations have failed to attract institutional investors, such as Mutual Funds, Pension Funds, Insurance Firms etc due to one major reason. The country **does not have credible Secondary Bond Market**. Secondary bond markets increase the liquidity of bonds issued by corporations (Power Sector Companies). This in turn makes them more attractive assets. Therefore, the policy needs to plant seeds of creation of **secondary bond market**.

Generation

The previous policies seem to have made number of mistakes that increased the cost of doing business for Generation Companies. NEP can pave the way for **auto-indexation** of various components of the tariff. This would reduce expenditure of public funds wasted in NEPRA determination while at the same time minimizing avoidable loss of business time. Similarly, workload for market operator (CPPA-G) can be reduced via **direct connection of CPPA-G[6] servers with the SCADA data** of power producers. Doing so would lead to a dispute free resolution of figures such as NPMV[7] values.

Previous power polices also failed to implement provisions for **B2B[8] sale of power**. The **SEZs**[9] of the **second phase of CPEC** provide an opportunity for B2B purchase of electricity. Such facilities benefit the nation by reducing cost of production **while reducing the burden of capacity payments** on the nation. Furthermore, NEP needs to introduce clauses for **conversion of old power plant into more relevant fuel mix**. Such conversions can happen through Novation or via new contract signing. Through these four generation orientated innovations, NEP can hopefully make up for sins of its fore fathers.

Transmission

The transmission sector needs to make similar amends. For too long, the sector has used **fixed wheeling charges** for a given area. This has skewed the sector incentives towards under-investment in transmission chokepoints. As a result, expensive investment in generation is not making its due contribution to the economy simply because the power cannot be evacuated or delivered to high demand areas. Introduction of **point of delivery transmission charges** would lead to a rational business model that prioritizes investment on the basis of transmission constraints.

Conclusion

As Pakistan looks back at a lost economic decade, brought-on in large part due to the power crises, it must plan ahead to thrive in the Asian Century. National Energy Policy would be one of the embodiments of that planning. In order to realize its geo-economic potential, the country must assure the world that it has the ability to learn from its past mistakes and possess the vision to look into the future. Both these assurances can be achieved by incorporating relevant factors into the upcoming NEP.

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[4] In the long-run this would lead to a decrease in the domestic share of consumption as industry related consumption is more sensitive to efficiency-based measures.

[5] Demand creation is good for the economy because it lowers the burden of capacity payments per KWh of power generation.

[6] Or any market operator that may replace it in the future.

[7] NPMV values

[8] Business to business.

[9] Special Economic Zones

Our Members

Sr.#	Project	Primary Fuel	Alternate Fuel	Plant Location	Gross Capacity (MW)	Net Capacity at CoD (MW)
Prior to 1994 Power Policy						
1	**The Hub Power Company Limited (Hub Plant)**	RFO	-	Tehsil Hub, District Lasbela, Baloshistan	1292	1200
Under 1994 Power Policy						
2	**Lalpir Power Limited**	RFO	-	Mehmood Kot, Muzaffargarh, Punjab	362	350
3	**Pakgen Power Limited**	RFO	-	Mehmood Kot, Muzaffargarh, Punjab	365	350
4	**Habibullah Coastal Power Co (Pvt.) Limited**	GAS	HSD	Sheikh Manda Killi Almas Road, Quetta	140	126
5	**Kohinoor Energy Limited**	RFO	-	Raiwind-Manga Road; Near Lahore	131	126
6	**TNB Liberty Power Limited**	GAS	HSD	Daharki, Distt. Ghotki, Sindh	235	211
7	**Rousch (Pakistan) Power Limited**	GAS	HSD	Sidhnai Barrage, Abdul Hakeem, District Khanewal	450	395
8	**Saba Power Company**	RFO	-	Farouqabad, Shiekhupura, Punjab	134	125
9	**Uch Power (Private) Limited**	GAS	-	Dera Murad Jamali, District Nasirabad	586	551
Under 1995 Policy						
10	**Laraib Energy Limited**	Hydel	-	7.5 km Downstream Mangla Dam, AJ&K	84	84
Under 2002 Power Policy						
11	**Attock Gen Limited**	RFO	-	Rawalpindi, Punjab	165	156
12	**Atlas Power Limited**	RFO	-	Sheikhupura, Punjab	225	214
13	**Engro Powergen Qadirpur Limited**	GAS	HSD	Qadirpur, Sindh	227	217
14	**Halmore Power Generation Co. Ltd**	GAS	HSD	Bhikki District Sheikhupura- Punjab	225	209
15	**Narowal Energy Limited**	RFO	-	5-km from Luban Pulli, on Main Narowal-Muridke Road, District Narowal	225	214
16	**Liberty Power Tech. Limited**	RFO	-	Faisalabad (near M-3 Industrial Estate)	200	195
17	**Nishat Power Limited**	RFO	-	Near Lahore	200	195
18	**Nishat Chunain Power Limited**	RFO	-	Near Lahore	200	195.722
19	**Orient Power Company (Pvt.) Limited**	GAS	HSD	Balloki, District Kasur, Punjab	229	213
20	**Sapphire Electric Company Limited**	GAS	HSD	Muridke, District Sheikhupura, Punjab	225	212.107
21	**Uch-II Power Project**	GAS	-	Dera Murad Jamali, Balochistan	404	381

Established in 2010, IPPA serves as an advisory body for Independent Power Producers (IPPs) in Pakistan. IPPA liaises with the government and related departments such as NEPRA, SECP, WAPDA, CPPA-G, NTDC and PPIB and also serves as a facilitator between various IPPs and stakeholders within the power sector.

If you have any suggestions or feedback, kindly write to us at feedback@ippa.com.pk