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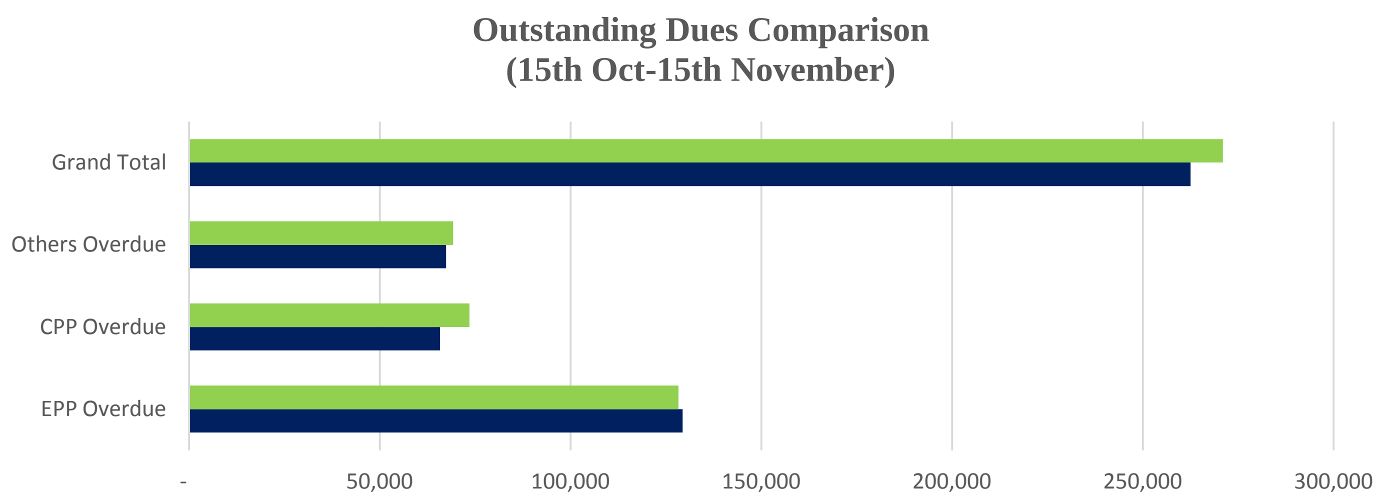
INDEPENDENT POWER PRODUCERS ASSOCIATION

MONTHLY NEWSLETTER

Welcome to the twenty-first edition of Independent Power Producers Association (IPPA) 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 November, 2018 in PKR Millions

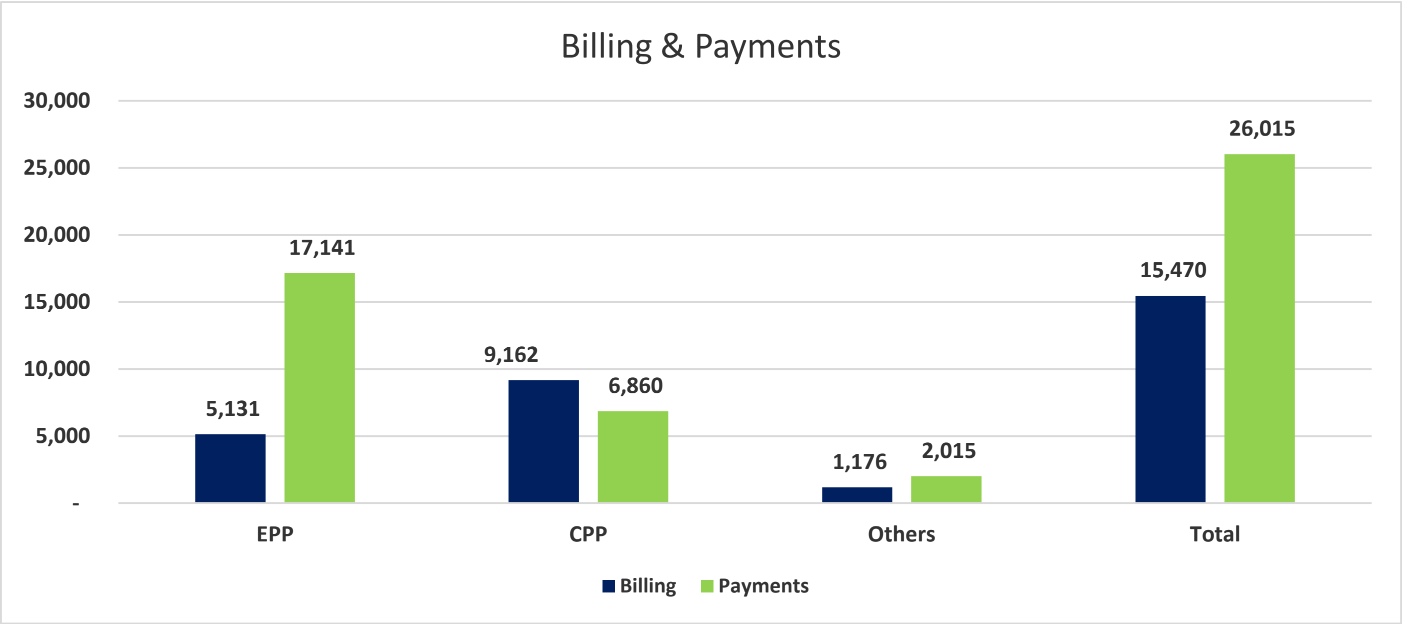


	EPP Overdue	CPP Overdue	Others Overdue	Grand Total
November	128,280	73,503	69,223	271,007
October	129,358	65,785	67,349	262,491

Source: Member and Subsidiary IPPs

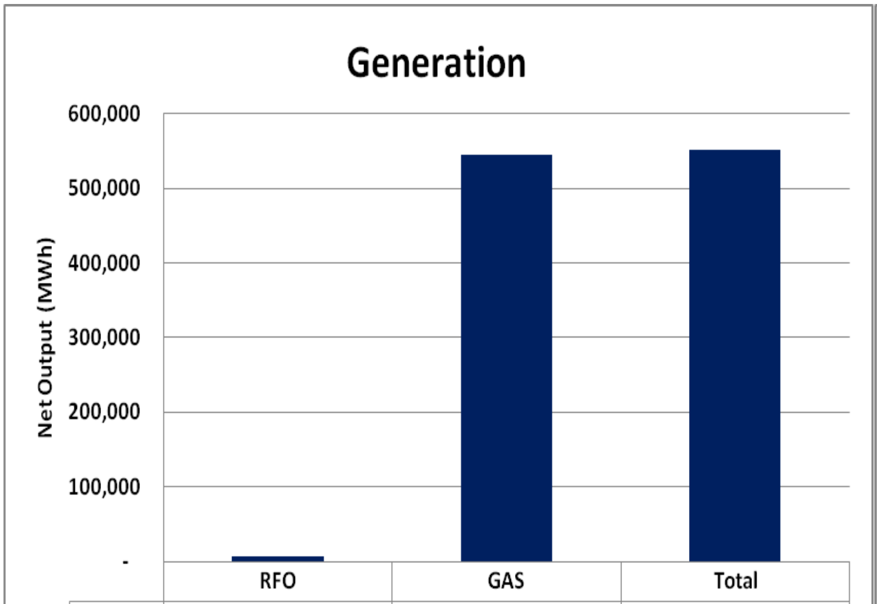
Monthly Infographics

Billing and Payments in November 2018 in PKR Millions

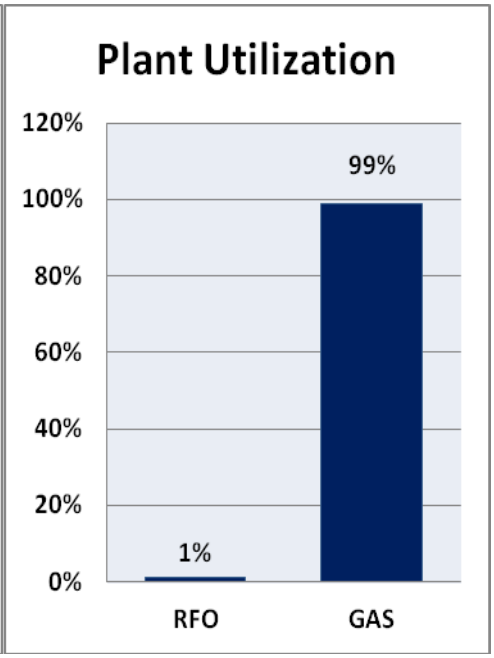


Source: Member and Subsidiary IPPs

Net Generation and Plant Utilization in November 2018



	RFO	GAS	Total
Series1	6,323	544,758	551,080



Source: Member and Subsidiary IPPs

Minister warns of Indiscriminate action against Power Pilferers

Islamabad: Federal Minister for Energy, Omar Ayub Khan warned in unequivocal terms that those who are involved in power theft would be dealt indiscriminately as the debt incurred by electricity pilferage has overburdened national economy. Addressing a press briefing here at Chief Minister's House on Saturday, he said that there would be a zero tolerance policy for power pilferers and those who have getting direct connections through 'Kumda's would be dealt with an iron hands and indiscriminately. The federal minister said that circular debt under electricity losses have been reached to an alarming figure of 1300 billion that is a matter of grave concern owing to its perils on country's economy. He informed that monthly losses of Pesco have been reached to Rs 4 billion adding among the losses 3.7 billion rupees were from Bannu region and certain areas of Mardan and Peshawar valley. He said that consumers that are regularly paying their electricity bills are affected by forced load shedding due to line losses and electricity theft. He said that we have been directed by Prime Minister, Imran Khan to devise a comprehensive plan and a result-oriented strategy to resolve the issue aiming facilitation of regular bill payers and the poor. Federal Minister informed the media that people would get relief by curbing Kunda culture while duration of forced load shedding would be gradually decreased in areas that would show increased revenue generation and decrease line losses.

Source: Business Recorder

NPPMCL's RLNG-based Power Projects

Karachi The Economic Coordination Committee (ECC) of the Cabinet has approved issuance of government guarantee to National Power Parks Management Company Ltd (NPPMCL) for raising Rs 38 billion funds from financial institutions to meet the financing needs for two RLNG-based power plants - Balloki and Haveli Bahadur Shah. A proposal put up to the ECC Finance Division contended that NPPMCL owned by federal government was established with the mandate to operate two re-gasified liquefied natural gas (RLNG) based power generation plants at Balloki, district Kasur, and Haveli Bahadur Shah, district Jhang, with capacity of 1223 MW and 1230 MW respectively. The projects had been approved by the Executive Committee of the National Economic Council (ECNEC) in February 2016 at the total cost of Rs 190.44 billion. Of the total cost, Rs 114 billion was provided by the federal government as cash development loan (CDL) to the NPPMCL at the standard terms during the fiscal years 2015-16 and 2016-17. The amount of cash development loan of Rs 114 billion disbursed to NPPMCL was acquired as advance against equity injection by the PDFL and to partially fulfill the funding requirements of NPPMCL, short-term loan of Rs 32.738 billion was also provided by the PDFL. Now the NPPMCL has requested Finance and Power Divisions to arrange project financing requirements of Rs 70 billion to pay off the remaining cost of projects and short-term loan of PDFL. The ECC was also told that the financing requirements of the NPPMCL were examined and it was decided, in consultation with relevant stakeholders, that the principal amount of Rs 32.738 billion provided by PDFL to NPPMCL as short-term loan would be converted into PDFL equity into NPPMCL.

Source: Business Recorder

Hubco CE Preparing Different Models

Islamabad: A private sector group headed by Chief Executive Hub Power Company (Hubco) Khalid Mansoor, is reportedly preparing different models for rehabilitation of Pakistan Steel Mills (PSM), to be shared with the federal government. Finance Minister, Asad Umar, who is also the Chairman of Cabinet Committee on Privatization (CCoP), had assigned this responsibility to Prime Minister's Advisor on Commerce, Textile, Industries and Production and Investment, Abdul Razzak Dawood. According to sources, a couple of Russian and Chinese companies have shown interest in acquiring stakes in the PSM. The representatives of these companies intend to physically visit the mills which is dysfunctional for the last more than two years but salaries are being paid to employees. The incumbent government has also paid billions to the employees without ant duty. When contacted Khalid Mansoor said, his team is comprised of technical people who worked in Engro and Engro Polymer for due diligence, refurbishment and relocation, in addition to experts who have already worked in PSM etc. "We will submit our unbiased assessment to government and then it will be up to the government to opt whatever option it wants," he added. Additional Secretary Ministry of Industries and Production, Abdul Jabbar Shaheen that in order to formulate a plan for operationalization of the PSM, MoI&P official intend to have detailed sessions with PSM management in the coming week, therefore, PSM management is required to start working on war footings in this regard.

Source: Business Recorder

Ajk Consumers to Be Charged At Par with Other DISCOS's

Islamabad: The federal government has decided to charge AJ&K domestic consumers using 1-100 units at par with those of other power Distribution Companies (Discos) whereas bulk power supply will be made from CPPA-G as is being done in case of K-Electric as per tariff determination by Nepra. Electricity Department of AJK receives the power in bulk and sells the electricity to its consumer in AJK at the distribution tariff rates determined by Nepra and notified by GoP. Funding required to purchase electricity is provided to Government of AJK by Government of Pakistan through its budget. Government of AJK had been disputing the rates being charged by the Discos . The matter was repeatedly taken up at the highest levels and, finally, in the year 2003 in the contract agreement of Mangla Dam Raising Project. Ministry of KANA & SAFRON constituted a sub-committee to firm up and submit its recommendations regarding rate of new electricity tariff for AJK beyond September 30, 2003; subsequently, in last meeting of the sub-committee chaired by federal Secretary Water and Power, it was decided that the tariff for AJK should be fixed at Rs.5.79/kWh, which is the tariff for 1-100 unit slab of domestic category, as majority of electricity consumption in AJK falls in that slab of electricity tariff. This tariff will remain applicable from July 1, 2015 till next tariff determination of 2015-16.

Source: Business Recorder

CJCSC underscores Self-Reliance for Energy Security

Islamabad: Chairman Joint Chiefs of Staff Committee (CJCSC) General Zubair Mahmood Hayat on Monday said that affordable and sustainable energy supply is crucial to steer the country out of economic crises. "Self-sufficiency and self-reliance is needed to ensure energy security," he emphasized, addressing as chief guest at the closing session of a seminar titled: 'Energy Security Policy: Thinking Beyond the Norm.' President CPSD, Lt-Gen. Agha M Umer Farooq (retd) welcomed the participants in his inaugural address. He underlined the significance of the subject, saying that commitments of the energy producer and habits of consumers need to be changed to encourage conservation, efficiency and a fuel mix, comprising indigenous resources. Renowned nuclear scientist Dr Samar Mubarak Mand presented a keynote speech at the inaugural session and shared his thoughts on the energy security prospects in Pakistan. Seminar comprised three working sessions focused on Water and Power, Oil and Gas and Renewable and Alternative Energy. Ghias Khan, CEO ENGRO Corp, Uzma Adil Khan, Chairperson OGRA and Amjad Ali Awan, CEO Alternative Energy Development Board, chaired the first, second and third working sessions, respectively. Lt. Gen Muzammil Hussain (retd) and former governor State Bank Dr Shamshad Akhtar who also served as caretaker federal minister enlightened the participants on various challenges and opportunities in the energy sector of Pakistan.

Source: Business Recorder

300MW Coal-Fired Power Plant

Board of Private Power & Infrastructure Board (PPIB) on Tuesday granted extension in Letter of Support (LoS) of +660kV HVDC Matiari-Lahore Transmission Line Project and Letter of Intent (LoI) of 300MW coal-fired power plant at Gawadar. Minister for Power Omar Ayub while presiding over Board's 121th meeting said that present government is working seriously on controlling theft and losses as well as re-hauling of transmission and distribution system of country to remove bottlenecks in the supply of electricity to consumers. Sustainability in the system is only possible by brining transparency in power system, induction of indigenous and renewable energy and introduction of new technology in transmission and distribution systems. Managing Director PPIB Shah Jahan Mirza briefed the Board on implementation status of the portfolio of power generation and transmission line projects currently being processed by PPIB. In this regard, the Board gave necessary approvals aiming to facilitate project sponsors for implementing their projects in a smooth and speedy way. Keeping in view the importance of much needed +660kV HVDC Matiari-Lahore Transmission Line Project which is specifically designed to provide power evacuation for Thar coal based power projects, the Board agreed to allow extension in Letter of Support for achieving Financial Close considering the merits that it is the first HVDC and first private sector project under CPEC which has achieved substantial progress and such extension would not compromise the completion date of the project which is March 2021.

Source: Tribune Pakistan

Govt to Recover Rs150bn from Power Defaulters

Minister for Power Omar Ayub said that the government will recover Rs 150 billion from defaulters during the current fiscal year for which a drive had already started. He was replying to questions raised by the members of Senate Standing Committee on Power under the chairmanship of Senator Fida Muhammad. Minister maintained that losses in FATA were 84 percent, adding there were issues both in Pesco and Tesco. He said stoppage of electricity theft and recovery from defaulters was a challenge, adding that share of 66 percent losses in Pesco were related to Dera Ismail Khan, Bannu and Peshawar. He said the share of Pesco in accumulated circular debt was Rs 250 billion. Secretary Power Irfan Ali who is actively monitoring drive against power sector defaulters and theft informed the committee that overall circular debt stock was over Rs 1.3 trillion which included loans parked in PHPL. He said, in Balochistan and KP, Discos officials were frightened in the name law and order. In fact, it is an issue of corruption, embezzlement and ill-gotten money. Minister stated that of Rs 650 billion, half of circular debt share was related to Peshawar Electric Supply Company (Pesco). Member Committee Aurangzeb Khan said electricity should be supplied to FATA's consumers because they were ready to pay bills. Minister stated that Discos were replacing kundas with ABC cable. Secretary Power Division said that in some areas of Pesco entire villages were using stolen electricity. He further stated that the Power Division had arrested 19 employees of Lesco. He acknowledged that some Discos were sending inflated bills to consumers. Chief Executive Tribal Electric Supply Company (Tesco) informed the committee that the company faced Rs 7 billion financial loss during war on terror. He briefed the committee that the company's consumers were 0.442 million. The company does not have funds to rehabilitate some grids and other systems. However, Additional Chief Secretary for FATA assured that whatever funds were allocated for Tesco in PSDP would be released soon. Omar Ayub further stated that the government was taking action against power thieves indiscriminately, adding that FIRs had been registered against 8,000 electricity thieves. He said honest consumers were facing the brunt of electricity thieves. He said 1.5 percent losses had been slashed during recent drive against defaulters and theft. Senator Moula Bux Chandio stated that it would be a great achievement if the incumbent government resolved the issue of circular debt.

Source: Business Recorder

SSGC Stops Gas Supply to CNG Sector, Captive Power Plants

The Sui Southern Gas Company (SSGC) announced on Tuesday that it was stopping supply of gas to the compressed natural gas (CNG) sector and captive power plants. To ensure uninterrupted supply of gas to its domestic and commercial consumers, the SSGC is discontinuing supply to the CNG sector and captive power plants till further notice.

Sindh Minister for Energy Imtiaz Shaikh said the federal government`s decision to stop gas supply to the captive power plants in the province was bound to cause unemployment and stir an industrial crisis. The minister said that gas loadshedding was a serious matter on which the prime minister had taken another U-turn. Only two days ago, the premier had promised Karachibased industrialists of an end to the loadshedding but the very next moment the supply to the captive power plants was stopped, creating a big crisis which would affect a number of factories, he added. Keeping in view the considerable reduction in RLNG supplies due to one-day outage of Engro Terminal for undertaking maintenance activities, RLNG supplies to the Punjab industry and CNG sectors shall remain suspended for next 24 hours starting from 0000hrs on December 12 and ending at December 13 (12am),` said a press release issued on Tuesday protest by drawing attention of the federal minister for petroleum to the first right of Sindh on the gas it produced and urged the prime minister to take notice of the decision to stop supply to the captive power plants and order its restoration.

Source: DAWN Pakistan

Govt to focus on Renewable Energy Projects

Prime Minister Imran Khan is giving preference to hydel and renewable energy projects for resolving energy related problems in Pakistan. He said that due to the efforts of the Chief Justice of Pakistan and the prime minister, Bhasha Dam would be constructed and funding issue would also be resolved. He was addressing national conference on energy crisis and its solutions organized by Punjab University College of Earth and Environmental Sciences (CEES) in collaboration with Pakistan Association for Advancement of Sciences (PAAS) at University Law College’s auditorium here on Monday. PU Vice Chancellor Prof Niaz Ahmad, University of Jhang Vice Chancellor Prof Dr Shahid Munir, Rifah University Vice Chancellor Prof Dr Arshad, CEES Principal Prof Dr Sajid Rashid, PAAS General Secretary Dr Saleem Chaudhry, scientists and engineers from various parts of country, faculty members and a large number of students participated in the conference. In his address, Ejaz Chaudhry said that the government was working on producing energy through solar, wind, wave, hydel and other projects. He said that there was abundance of natural resources in Pakistan and we could construct a large number of small and big dams to utilize water resources. However, he said, Pakistan would face water crisis in the next 10 to 15 years and we need to prepare ourselves to avoid this crisis. He said that our communication and distribution systems were obsolete and the government would curb line losses and electricity theft incidents during its five-year tenure.

Source: Business Recorder

Rs 25.75bn Supplementary Grant Approved

The federal cabinet has approved Rs 25.75 billion supplementary grant to provide subsidy to zero-rated export-oriented industry and captive power plants (CPPs) for use of re-gasified liquefied natural gas (RLNG). The cabinet also approved a gas subsidy of Rs 5.5 billion to maintain the prices of fertilizer at current level. To minimize the price differential between imported and local LPG, the cabinet has also reduced the GST rate from 17 percent to 10 percent. The cabinet decided that gas supply to the industrial sector [exporters of the zero-rated sectors namely textile (including jute), carpets, leather, sports and surgical goods] in Punjab will be revised from 28:72 to 50:50 for domestic gas and RLNG respectively. The weighted average gas tariff of such consumers shall be $ 6.5 per MMBTU. The cabinet reversed a decision of allocating system gas to only zero-rated industry for production purposes only. Now, subsidized gas will be provided to zero-rated industry both for production purposes and electricity generation. Previously, in view of electricity shortage, significant volume of gas was required to be consumed by the industrial sector for power generation; however, given the assured availability of electricity in the system, the subsidized gas was not allocated for captive powers. Minister for Petroleum and Natural Resources, Ghulam Sarwar Khan said that like domestic consumers, industrial consumers are also very important for the economy of country. M/s SNGPL will provide a subsidy calculation at $ 6.5 per MMBTU taking into account actual gas/ RLNG consumption by the 536 zero-rated industry consumers (process+ captive) old/ new i.e. 215.28 MMCFD (69.96 MMCFD for process and 145.32 MMCFD for captive) for the period after October 16, 2018. The subsidy calculation has been projected at Rs 25.75 billion up to June 2018.

Source: Business Recorder

CPPA-G becomes Market Operator

The power sector in Pakistan is structurally flawed. Being the most dominant player sector, the government has failed to institute the necessary reforms required for the financial and operational sustainability of the power sector. At the core of the problem is the use of take or pay contracts, which are most often than not inflexible documents guaranteeing electricity off-take by the government that does not have any credible demand forecasts to plan its purchases. The result is excess capacity payments burden on the exchequer and an uncompetitive electricity market. Across the globe, countries have opted for competitive energy market models, which essentially trade electricity market as a commodity on an exchange. The interaction between demand and supply forces results in minimum wastage of power while ensuring reliable supply at the same time. In a welcome move, Pakistan has also embarked on making the transition to a competitive market based electricity model. The transition will hopefully take not more than three years and is expected to be concluded by July, 2020. Recently, the government has given permission for the Central Power Purchasing Agency (Guarantee) Limited (CPPA-G) to become the market operator, which will allow the entity to purchase and sell power in line with a market based mechanism. Currently the entity is carrying out two functions that include procurement of power and energy market development. Going forward, the CPPA-G will only carry out market development and will need to separate or remove its power procurement role. However, stakeholders have also expressed other reservations, which include questioning the financial strength of the CPPA-G to become a market operator. Indeed, the overall capacity of the CPPA needs to be drastically improved before it can successfully carry out its role as a market operator. Currently, it relies on sovereign guarantees by the federal government, which will not be there once the competitive market is in place.

Source: Business Recorder

Govt's steps to help reduce circular debt, Power Division claims

Power Division claims that recent measures taken by the federal government will help reduce circular debt which is hovering around Rs 600 billion. The government has increased power tariff by 11 per cent, in addition to crack down against defaulters and electricity thieves. With these drives, the collection from consumers has improved by Rs 13.7 billion.
Last week Power Division informed Prime Minister Imran Khan that it is making serious efforts to reduce circular debt. For this purpose, a commercial loan of Rs 35.8 billion has been acquired to reduce the burden further. The Power Division has also finalized arrangement to get Rs 100-200 billion Islamic financing on behalf of PHPL against 43 assets of Discos and Gencos to bring down the circular debt aimed at saving late payment surcharges on payments to IPPs. However, insiders claim the new borrowing will increase the debt stock of PHPL to Rs 800 billion. The sources said Power Division has given the target to Discos to recover Rs 80 billion from old receivables while freezing the receivable figures as they stood on October 31, 2018. Discos have also been directed to recover another Rs 60 billion by controlling theft and improving governance/ efficiency. This activity has already started across Pakistan and in the long run will help in setting off the impact of industrial support package subsidy. Power Division maintains that the general public and the officials of Discos are getting the message of a proactive anti-theft campaign and there is a visible decline in the incidents of electricity theft. This can be illustrated by the decrease in line losses by 1.5 per cent during October 2018. It is an encouraging result of this campaign and as it scales up, it will leave a lasting beneficial impact in future. According to Power Division, the anti-corruption and anti-theft drive has shown positive effects on recovery of outstanding dues as well. It has motivated the consumers to pay the bills on time.

Source: Business Recorder

Fortnum deploys battery to aid Swedish hydropower plant

Finnish clean energy solutions firm Fortnum has announced it will deploy a 5MW/6.2MWh battery system to assist a Swedish hydropower plant. The new battery energy storage system will support the Forshuvud hydropower plant by providing frequency regulation services in order to balance the grid. Fortnum head of asset management for hydropower Martin Lindström said: “Batteries are thought to be used mostly to store energy. Now, however, we will try connecting a battery to a hydropower plant with the idea of improving the plant’s ability to function as regulating power for the Nordic electricity network. The battery’s very quick response time improves the speed and preciseness of the Forshuvud hydropower plant’s regulation, so we are able to provide even better service to grid companies. We hope that this significant innovation helps us to more quickly achieve Sweden’s ambitious targets for renewable energy use and create a cleaner world. An overwhelming majority of Sweden’s grid frequency regulation is provided through hydropower projects, but according to Fortnum, batteries could play a more prominent role in this in the future as short-term and quick response balancing has a ‘wear and tear’ effect on hydropower turbines.

Source: Power Technology

OPD Energy Plans Global Solar Projects with Combined Capacity of 500 MW

Spain-based energy assets developer OPD Energy is planning to build seven photovoltaic (PV) global solar projects in Spain, Chile and Mexico next year, which will have a combined capacity of 500MW. Financed under Project Finance Scheme with various financial institutions, the company will invest nearly €500m on these projects. In Spain, OPD Energy will construct seven PV plants with a combined capacity of 300MW. These plants will be located in Extremadura, Andalucía and Aragon, and expected to commence operation by end of next year. OPD Energy intends to develop a 50MW capacity at La Fernandina solar plant in Extremadura. At Andalucía, the firm will build two 50MW capacity plants – each at Puerto Real of Cadiz and Alcala de Guadiana of Seville. The company will also develop 148MW capacity, which will be distributed among the new photovoltaic solar plants in Los Belos of Zaragoza and Montesol of Teruel and their extensions too. In Chile, the company intends to build a 50MW capacity solar facility. The construction of this plant will be carried out within the framework of 176GWh per year block of energy award secured by the company during the public energy tender in 2016.

Source: Power Technology

EGPE begins construction of three new Spanish solar plants

Enel Green Power España (EGPE), a renewable energy division of utility company Endesa, has begun construction of three Spanish solar plants with a combined capacity of around 127MW. The three solar facilities at Navalvillar, Valdecaballero and Castilblanco, being built with an investment of nearly €100m, will have an installed capacity of more than 42MW each. It will be the company’s first solar parks in Badajoz province of the Extremadura region. Enel Global Renewable Energy head Antonio Cammisecra said: “These three projects further strengthen our presence in Spain, where we have started construction of ten new renewable projects over the last two months. “In addition to actively expanding the company’s presence in the country, our aim is to continue promoting innovation by applying cutting-edge technologies based on digitalization and robotisation, as well as sustainability by implementing best practices already in place in our construction sites worldwide.”

Source: Renewable Energy World

RENEWABLES: TRAJECTORY AND PROSPECTS

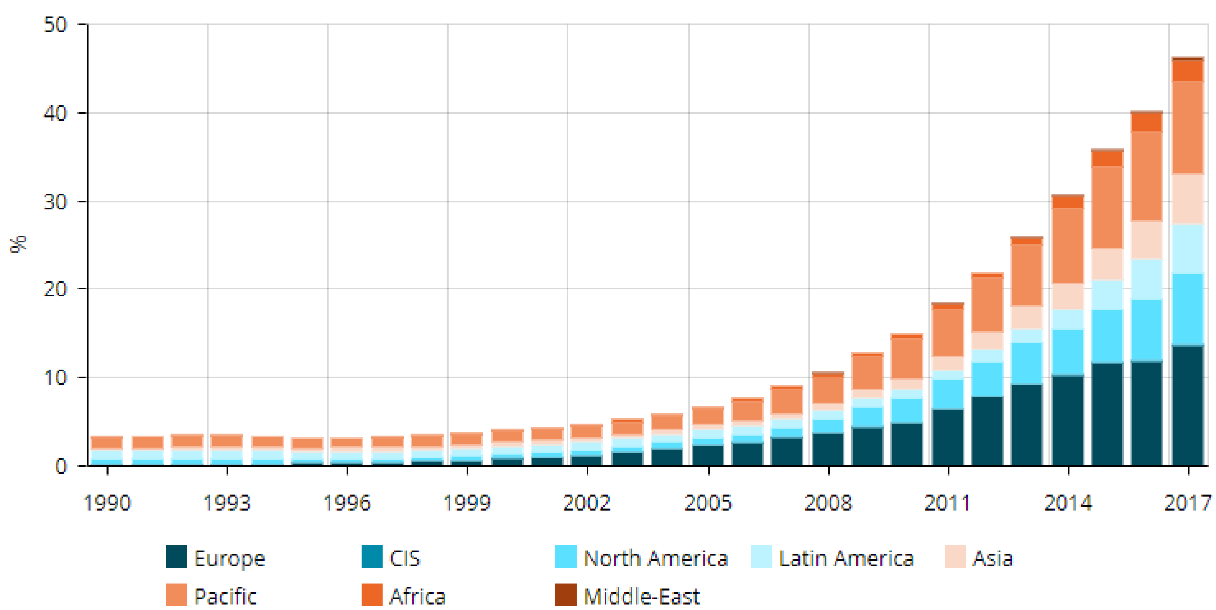
As Britain reached its maximum coal production in 1918, it faced a drastic slump in the following years, reminding it of the finitude of resources, which was blatantly exploited. History repeated itself when similar status of production was achieved in 2000 for oil & gas in North Sea. This is just one of many examples that force us to probe into the dilemma of cost, efficiency and more importantly scarcity; dictating the former two. Something other than conventional fuels was the need for future security.

The introduction of the concept of renewable energy in the public consciousness in 1970s introduced the prospect of an ethical and environmentally cognizant method of energy generation. However back then, no one could have predicted the pace with which it propelled through these past 4 decades. Ambitious climate policies and dramatic fall in the production of renewable energy sources (RES), specifically solar and wind, seem to be two glaring factors. Evidence of their emergence in contemporary times is their coverage of 1/3 of power mix in Europe, 1/4 in China and 1/6 in the United States, India and Japan. Its share in the global power generation mix was a startling 25% in 2017. During same year, solar and wind were responsible for 20% and 30% of the additional power generation respectively. As for what the future entails for RES, International Energy Agency (IEA) expects renewable electricity generation to rise by over one-third by the year 2022. Considering all these indicators, we can wholeheartedly say that, given the global attitude, climate concerns, productivity, technology and market mechanism, RES is here to stay and dictate the future global energy dynamics.

It is imperative to note here that Solar, among other RES, has proved to be more sustainable and productive for most investors. David McKay, an energy expert from U.K identified Solar panels in Desert sun to produce the most Watts per square metre, from a point of view of geological and spacial-based output. ‘Wind drought’ in western Europe earlier this year in August cemented the erratic effect of wind power, though the output lost was more than replenished by the solar sector. This came up on the radar of ‘Vaisala’, a company that collects and analyzes weather-related data globally.

Global gait

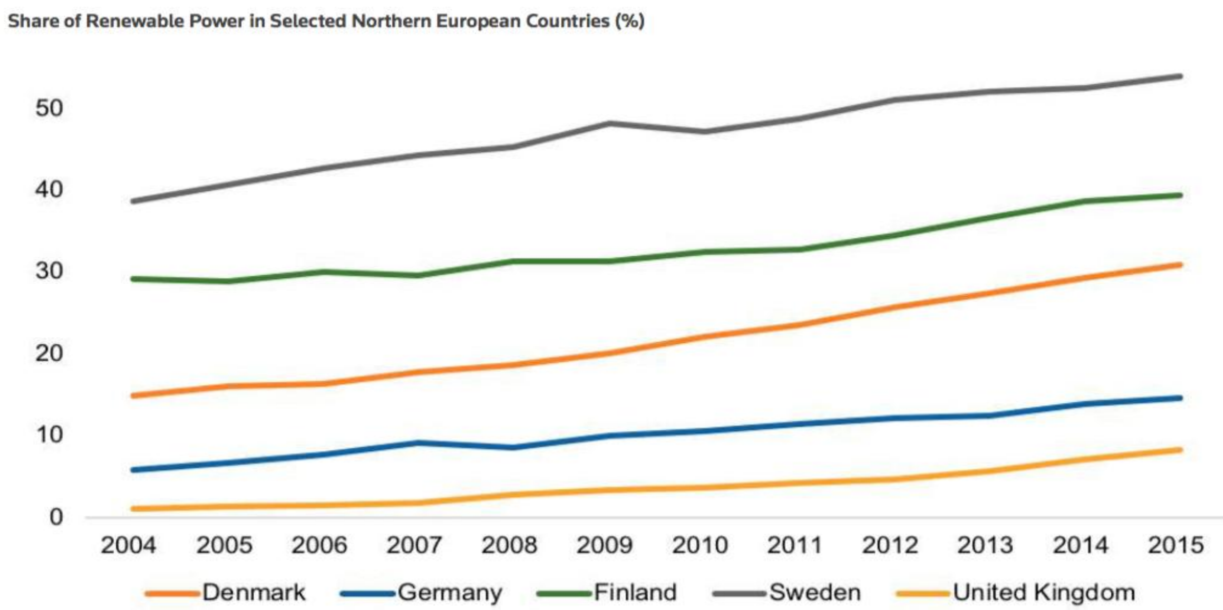
It is prudent to have a bird’s eye view at the direction of renewable utility across the globe. Ambitious plans and policies –especially in Asia –have helped to install over 600 GW of solar and wind capacity since 2010. As reported by Reuters, the fastest increase was recorded in European Union (in Germany and the UK), followed by China, Brazil, the United States, India and Japan.



Source: Enerdata

EU can be seen carrying the flag, though fueled primarily by subsidies. Taking heed from this experience, one wonders if PTI govt. can match this factor with their climate change commitments whilst simultaneously curbing the fuel import bill. Moreover, technology is progressing by leaps and bounds and has emerged as the second major factor for the recent reports quoting productivity boosts in RES.

Carrying along EU as an example, following graph depicts the country-wise trend.



Source: Reuters

As for policy examples, California quite recently voted to get 100% of its electricity from renewable sources by 2045. Even Africa, South Africa and Angola are at the bulwark of facilitating IPPs in renewable sector, by commissioning different entities to expedite the pace of competitive bidding, infrastructure development and supply chain management.

At micro level, as far as possible avenues of investment are concerned, the opportunity in smart city projects in Pakistan can be seized. Valuable Learning can be gained from the experience of Southern Company as its general manager of hydropower, Herbie Johnson, shared at Power-gen platform. They developed a microgrid around a new community of 64 smart homes. The homes use solar and battery energy storage and have smart interconnected devices that talk to the grid and know when to turn on and off according to the energy supply available. This endeavor gave a high profit margin. The only prerequisite for its implementation here is the cohort of right customers. The concept to subsidize solar home systems (SHS) is also afloat in the local media nowadays.

Reluctance Regarding Renewable

Yet, issues besetting renewables are and will be requiring due attention to detail. Following are the few ones that are –keeping naivety aside –tip of the ice berg.

Cannibalization: As societies explore the various ways to generate renewable energy, some technologies will overcome others. Renewable energy (RE) can be produced at a lower cost than traditional sources meaning that there’s less revenue to be made. As a consequence, some RE companies will be starved out of the industry. Technological vigilance is imperative to stay best among the rest.

Inflexibility: One of the earliest doubts hovering renewable energy i.e. how to manage intermittent nature has not yet been addressed? |For instance, wind and solar energy are not viable in places where sun shines erratically or the wind isn’t consistent. Moreover, storage facilities are still a question mark. Bloomberg New Energy Finance (BNEF) Report suggests that “precipitous reductions” in cost will enable intermittent renewables power to be stored and discharged to meet shifts in demand and supply.

Domestic Aura

Government intends to focus towards clean energy and increase its share in the energy mix. A consultative process involving key stakeholders of renewable energy sector has been started since the new Government took over to ensure sector recommendations are incorporated in the policy. During this consultation process, role of AEDB was critiqued on account of sitting on a draft request for proposal (RFP) for solicitation of renewable energy on competitive terms for the last three years. The sector experts were of the view that such delays are detrimental to the promotion of clean energy.

The government is aiming to finalize the renewable energy policy by January 2019. Alternate Energy Development Board (AEDB) is of the view that indigenous resources of natural gas accounted for 24% of electricity produced in the country and alternatives are needed direly to compensate for rapidly depleting gas resources. Moreover, Pakistan should aim for generating at least 30% of electricity from renewable energy resources in the next five to seven years. Presently, Re-gasified liquefied natural gas (RLNG) is being imported to lessen reliance on indigenous gas reserves. Out of which, 63% is used for power generation which is not a feasible option given its high tariff of up to Rs9.02 per kilowatt-hour; from a consumer’s perspective.

However, as much as policy formulation is taking priority, the hurdles in executing on ground projects paint a different picture. For instance, Gharo-Jhimpir Wind project is halted due to pending issues related to lease of land. On the flip side, power production from 20 operational wind power projects in Sindh has gone up to 1037 Megawatts (MW) while completion of four more (200 MWs potential) wind energy plants is underway. In addition, 35 wind projects are in different stages of development in the province and can generate up to 2500 MWs electricity.

Future Outlook

One of the key quotable reports is, “Pakistan’s Power Future: Renewable Energy Provides a More Diverse, Secure and Cost-Effective Alternative,” produced by the Institute for Energy Economics and Financial Analysis (IEEFA), analyses the current energy system in Pakistan while suggesting an alternative energy model for 2030. It estimated present energy mix ratio of 70:20:10 with 70pc being thermal and 20pc hydro, with nuclear power making up most of the rest. IEEFA’s proposed energy model to 2030, aimed at providing a cheaper, more diversified electricity generation system for Pakistan roughly split in a ratio of 30:30:30:10 between 30pc renewables, 30pc thermal, 30pc hydro, and 10pc nuclear power. This is attuned with aforementioned AEDB recommendations. As far as local predictions are concerned, NEPRA's forecasts of Pakistan’s energy generation mix by 2025 is a baby step towards the right direction. Though, the expectations from wind and solar aren’t that high.

Key studies

- “Pakistan’s Power Future: Renewable Energy Provides a More Diverse, Secure and Cost-Effective Alternative,” produced by the Institute for Energy Economics and Financial Analysis (IEEFA)
- Tribune piece “Pakistan’s renewable energy agenda” by Khurram lalani.
- Nepra's forecasts of Pakistan’s energy generation mix by 2025.
- “Renewable energy resource potential in Pakistan” by Munawar A. Sheikh published in the Journal of Renewable and Sustainable Energy Reviews.
- “An assessment of renewable energy potential for electricity generation in Pakistan” by M.K Farooq and S. Kumar from Asian Institute of Technology, Thailand.

Titbit- For those having interest in climate change and relevant tech. ‘carbon engineering’ firm should be checked out. Their work is quite groundbreaking in producing carbon free fuel extracted from atmospheric carbon dioxide.

Our Members

	Member IPPs	Primary Fuel	Alternate Fuel	Gross Capacity (MW)	Net Capacity (MW)
1	The Hub Power Company (Tehsil Hub)	RFO	HSD	1292	1200
2	Pakgen Private Limited	RFO	-	365	350
3	Lalpir Private Limited	RFO	-	362	350
4	Kohinoor Energy Limited	RFO	-	131	126
5	TNB Liberty Power Limited	GAS	HSD	235	211
6	Uch Power (Private) Limited	GAS	-	586	551
7	Rousch (Pakistan) Power Limited	GAS	HSD	412	395
8	Habibullah Coastal Power (Pvt.) Co.	GAS	HSD	140	126
9	Attock Gen Limited	RFO	HSD	165	156
10	Atlas Power Limited	RFO	HSD	225	214
11	Nishat Power Limited	RFO	HSD	200	195
12	Nishat Chunain Limited	RFO	HSD	200	195.6
13	Liberty Power Tech. Limited	RFO	HSD	200	195
14	Orient Power Company Limited	GAS	HSD	229	213
15	Saif Power Limited	GAS	HSD	229	209
16	Sapphire Electric Company Limited	GAS	HSD	225	209
17	Halmore Power Generation Co. Ltd.	GAS	HSD	225	209
18	Engro Powergen Qadirpur Limited	GAS	HSD	227	217
Subsidiary IPPs					
19	Hub Power Company Ltd (Narowal)	RFO	-	220	214
20	Uch-II Power (Pvt) Ltd	GAS	-	404	375.2
21	Saba Power Company (Private) Limited	RFO	-	134	125.5

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