

Assessing TANGEDCO's Compliance to Distribution Standards of Performance (DSOP): An Analysis of RTI Data for the Year 2016 (Part -2)

The [previous issue](#) presented an introduction to the regulatory framework of the electricity sector. It also highlighted the TNERC regulation that outlines the [Distribution Standards of Performance \(DSOP\) 2004](#) in Tamil Nadu. This section of the editorial seeks to inquire into TANGEDCO's level of performance in carrying out its service in line with the said regulation.

Objective: The central objective of this editorial is to understand whether TANGEDCO has been able to adhere to the standards of performance stipulated by TNERC's DSOP Regulations. In order to assess the same, periodical statements published by TANGEDCO are reviewed and scrutinised in the light of pertinent sections of the said regulation.

Background and motivation for the study: As per Section 23, DSOP Regulations, "Level of Performance" specifies that the licensees are required to achieve the targeted performances in 13 different individual service areas such as giving new supply/additional load and shift of service etc. Further, in order to evaluate the overall level of performance, Section 24, Information on Standards of Performance, highlights that "TANGEDCO as the distribution license shall furnish the information on (i) the level of performances achieved, (ii) number of cases in which compensations were paid and (iii) the aggregate amount of compensation paid, once in six months".

As per the above highlighted sections, TANGEDCO has been regularly publishing data on its achieved level of performance in the format prescribed by the regulation. A review of the data published from 2016 through 2018 suggests that TANGEDCO has largely achieved its target level of performance, and in some cases, the target has also been surpassed. For example, DSOP regulation highlights that the targeted level of performance within a period of six months to provide new supply connection/additional load shall be 95%. Published data indicates that between October 2016 and March 2017, TANGEDCO's achieved level of performance in providing new supply/additional load is 97.07%.

Further, it must be noted that TANGEDCO has put out the figures based on information received from its circle offices across Tamil Nadu. This data has been converted into a broad percentage against the stipulated percentage target. As a result, this data does not provide for more in-depth analysis except for the fact that TANGEDCO achieved and has even exceeded the target set by TNERC in all parameters from restoration of supply to grievance handling. Even though the achieved level of performance is reportedly higher than the target, it must be observed that there is a lack of adequate information in the report of the total number of applications, the number of pending applications, the time taken to process applications, and compensation given. This lack of detail does not allow scrutiny with regard to accuracy of the reported level of performance.

Given the context, the upcoming issues will focus on inquiring into the accuracy of TANGEDCO's published data in line with its level of performance against various standards of performance outlined by the regulations. *(to be continued...)*

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Internet of Things (IoT) (Part -2)

The role of sensors and connectivity in the Internet of Things (IoT) was explained in the [previous issue](#). This issue will focus on data processing.

Data Processing:

The data is collected through IoT Platforms on a continuous basis. Therefore, this data needs to be also processed to arrive at meaningful outputs. Data processing is the collection and manipulation of data to produce meaningful information. It is called as the data processing cycle. The purpose of data processing is to convert raw data into useful information. According to [tarckinno](#), data refers to raw, unorganized facts, and it usually is fairly useless until it is processed. Once the data is processed, it is called information. Data processing involves the following steps a) input, b) processing, and c) output.

a) Input: As the [data collected](#) can be in any form (images, QR Codes, text, numbers, or even videos), it must be converted into machine-readable language before being sent for processing. Data collection or input is an important stage since the output is completely dependent on the input data.

b) Processing: The collected data will then be processed by using different techniques like classifications, sorting and calculations for analysing and retrieving meaningful information from the data received.

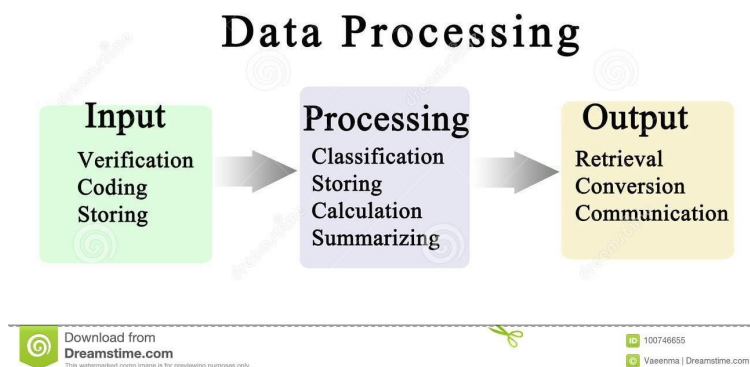


Image 1 - Data processing flow chart

c) Output: This information is rendered into a human-readable format and presented as an output to the end-user as useful information. The [output](#) of the data processing can be stored for future usage as well. This stored information may also be used as an input for further processing or it can also be used as historical references which will be used to detect trends in the future.

Considerations for data processing:

a) Storage: IoT produces massive data which needs to be stored. One needs [an efficient, scalable, affordable way](#) to both manage those devices and handle all that information and make it work for you. For this purpose, data needs to be stored, processed and analysed on the internet through platform such as cloud storage. This is then retrieved for computation into understandable output. Cloud storage are offered as a service by several internet companies such as [Google Cloud](#), [Western Digital](#), [Microsoft Azure](#) etc.

b) Frequency of updates: Considering large volumes of data will be collected and stored, it is important to decide the frequency of updates. For example, a consumer may receive the temperature data of a cold storage plant every 10 minutes. Based on this, the consumer may decide calculate how many instances the temperature crossed the threshold limit and may find reasons for the increase in temperature.

c) Data processing tools: The [data processing tools](#) are used to organise, store, recover and process numerical data. Applications like Microsoft Excel are an example of calculation and analysis of numerical data, [Trackinno](#) cloud service, which is designed for asset management purposes. Some of the best tools and platforms being used for IoT data processing in 2019 are highlighted in [Fuzon](#). *(to be continued...)*

Tamil Nadu News

Tangedco makes completion certificates compulsory for power connections

The Tamil Nadu Generation and Distribution Corporation (Tangedco) has made it compulsory for building owners and commercial units to submit a Completion Certificate (CC) from their respective local bodies, in order to get a power connection. In an official memo sent to all local electricity officials in the State, Tangedco has said officials must ensure that the building has been constructed as per the approved plan in order for it to get a power connection. However, Tangedco has exempted residential buildings which do not exceed 12 metres height, and do not have more than three dwelling units, as well as buildings with a total built up area of under 750 square metres.

A senior official of Tangedco said that rules are already in place for providing electricity supply only on submission of CCs for flat developers and commercial units that exceed 900 square metres. Earlier, no CC was required to be submitted for industrial or commercial units, individual houses with any number of dwelling units and individual houses/flats with stilt plus three floors or ground plus two floors. But now, the rules are being made more stringent based on the orders of the Madras High Court which stipulated that service utilities including Tangedco and Metrowater follow the Tamil Nadu Combined Development and Building Rules, 2019, which came into force from February 4 last year.

The State government had issued a Government Order notifying the Combined Development and Building Rules, 2019, through the Municipal Administration and Water Supply Department. The electricity official said the new rules could make it hard for residents to get any additional connections for existing buildings because of the need for the CC document. The new notification would also cause confusion for house owners who want to convert a portion of their house for commercial exploitation, for which a commercial connection would be needed, he added.

Source: [The Hindu](#), July 10, 2020

India News

India to have 60% renewable energy by 2030: Power minister RK Singh

India will have around 60 per cent of its installed electricity generation capacity from clean sources by 2030, Power and New & Renewable Energy Minister R K Singh said on Tuesday. The minister also exuded confidence that the renewable energy capacity would touch 510 GW by 2030, including 60 GW of hydro power. In September last year at the United Nations Climate Action Summit, Prime Minister Narendra Modi had announced increasing the renewable energy target to 450 GW by 2030 from 175 GW by 2022. Participating in a webinar organised by The Energy Resource Institute (TERI), Singh said, "I would say that by 2030, 60 per cent of our capacity will be from renewables, and that is on a conservative scale."

The minister explained that by 2030, 450 GW of power generation capacity would come from renewables like solar and wind. Besides 60 GW would come from hydro-electric power, he said. About the progress on clean energy, he said that India's clean energy capacity including under development projects and hydro electric power is around 190 GW, which is more than the targetted 175 GW by 2022.

During the webinar, the minister launched a report, titled 'Renewable Power Pathways: Modelling the Integration of Wind and Solar in India by 2030'. The minister also launched a report titled Bending the Curve: 2025 Forecasts for Electricity Demand by Sector and State in the Light of the Covid Epidemic'.

Source: [Business Standard](#), July 21, 2020

Consumer Focus

The petitioner, a domestic consumer, wanted to shift/deviate the LT/HT electrical lines in their vacant residential plot. They registered their request under Deposit Contribution Works (DCW) provision with the utility on 12.03.2019. Based on the request from the petitioner, the utility prepared an estimated amount of Rs 2,11,290/- and communicated the same to the petitioner on 15.03.2019. The petitioner paid the amount in full to the utility. But the utility had only partially completed the work by 20.07.2019. The petitioner approached the utility and requested them to complete all the pending shifting works. Subsequently, the work was completed on 21.09.2019.

The petitioner registered a complaint with the Consumer Grievance Redressal Forum (CGRF) to award compensation for the delay in completing the work. The utility stated that work was not delayed intentionally. Further, it added that there were some technical difficulties while shifting the lines. TANGEDCO also pointed to the Code of conduct for Lok Sabha election, 2019 which prevented them from completing the work. The CGRF instructed the utility to prepare a revised estimate based on the actual cost of the work and directed to repay the balance amount of cost (if any) paid by the petitioner. As per CGRF judgement, the utility handed over a cheque for an amount Rs. 14,020/- to the petitioner on 13.01.2020. Further, the CGRF Judgement also stated that there are no provisions in TNERC DSOP regulations for compensation in the delay of DCW works. Dissatisfied with the CGRF judgement, the petitioner appealed to the Electricity Ombudsman to avail additional compensation.

On hearing the arguments of both the parties, the Electricity Ombudsman issued the below findings. Based on i) the Tamil Nadu Electricity Distribution Standards of Performance, Regulation, 2004 ([DSOP](#)) clause 7 - *Shifting of Service Connection / Deviation of Lines and Shifting of Equipments*, it is noted that the time schedule for shifting of LT/HT lines is 60 days. ii) It is noted that the [Code of conduct for Lok Sabha election, 2019](#) was in force only up to 23.05.2019 and the utility had sufficient time to complete the work. iii) According to Tamil Nadu Electricity [DSOP Regulation](#), clause 21 - compensation, a consumer is eligible to get Rs.100/- per day of delay subject to maximum of Rs.1000/- as compensation.

Since the utility took more than 120 days to complete the work, the Electricity Ombudsman ordered that the petitioner is eligible to get a maximum compensation of Rs.1000/- and resolved the issue by ordering the utility to submit the compliance report within 45 days from the date of receiving the order.

Source: [Ombudsman Case](#)

ECC VOICE

திருநெல்வேலி மாவட்டம், பாளையம்கோட்டையில் உள்ள N.G.O காலனியில் மின் கம்பம் எண் 1019 முதல் 1022 வரையிலான மின் விளக்குகள் தினமும் இரவில் சுமார் 07:00 மணிக்கு மேல் எரிவதில்லை என பொதுமக்கள் பாளையம்கோட்டை நகராட்சியில் புகார் செய்துள்ளனர். மேலும், அப்பகுதியில் தெருவிளக்கு பராமரிப்பு செய்யும் பணியாளரிடம் தெரிவித்தும் எந்தவித நடவடிக்கையும் மேற்கொள்ளப்படவில்லை. அப்பொழுது நாளிதழில் வெளிவந்த திருநெல்வேலி மின் நுகர்வோர் மையத்தின் விளம்பரத்தினை கண்டு, திரு. ஆறுமுக சிவா சுப்பிரமணியன், திருநெல்வேலி மின் நுகர்வோர் மையத்தின் மின் ஆலோசகர் திரு.சண்முகம் அவர்களை தொலைபேசி மூலம் தொடர்பு கொண்டார். பொதுமக்கள் சார்பில், தங்கள் பகுதியிலுள்ள புகாரை தெரிவித்தார்.

புகாரினை பெற்றுக்கொண்ட மின் ஆலோசகர், பாளையம்கோட்டை நகராட்சியின் பார்வைக்கு எடுத்து சென்றார். நகராட்சியின் பணியாளர்கள் அவ்விடத்தை ஆய்வு செய்தபொழுது, மின் விளக்குகளுக்கு வரும் மின்சார பாதையில் மர கிளைகள் பட்டு, மின்சாரம் தடைபடுகிறது என்று அறிந்தனர். இதன் காரணமாக, மின் விளக்குகள், இரவில் குறுகிய மணிக்குள் அணைந்து விடுகிறது என்ற தகவலினை மின்ஆலோசகருக்கு தெரிவித்தனர். மின் ஆலோசகர், அப்பகுதி மின்வாரியத்தின் செயற் பொறியாளர் அவர்களை தொலைபேசி மூலம் தொடர்பு கொண்டு, இப்புகாரினை விவரித்தார். மேலும், மின் பாதைகளில் பட்டுக் கொண்டு இருக்கும் மரக்கிளைகளை அப்புறப்படுத்துமாறு கேட்டுக்கொண்டார். மின்வாரியத்தின் செயற் பொறியாளர், மின் ஆலோசகரின் வேண்டுகோளின்படி மரக்கிளைகளை வெட்டுவதற்கு அப்பகுதியில் ஒரு மணி நேரம் மின்சாரத்தினை நிறுத்தி, பொதுமக்களின் உதவியோடு கிளைகளை அப்புறப்படுத்தினார். அதன் பிறகு மின் விளக்குகள் தடங்கலின்றி இரவில் தொடர்ந்து எரிந்து கொண்டுள்ளது. நீண்ட காலமாக தொடர்ந்து வந்த பிரச்சனைக்கு தக்க நடவடிக்கை எடுத்து உதவிய திருநெல்வேலி மின் நுகர்வோர் மையத்திற்கு திரு. ஆறுமுக சிவா சுப்பிரமணியன் மற்றும் பொதுமக்கள் தங்கள் நன்றியினை தெரிவித்தனர்.

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Citizen consumer and civic Action Group (CAG) is a non-profit, non-political and professional organization that works towards protecting citizen's rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision making.

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World News

Germany installs 591MW onshore wind in 1st Half of 2020

Germany's installed onshore wind capacity increased by 591MW in the first half of 2020, according to figures collected by Deutsche WindGuard on behalf of BWE and VDMA Power Systems. The increase is double that installed in the same period in 2019, when 287MW of new onshore capacity was built in the country.

The associations forecast an addition of at least 1.5GW for the whole of 2020, but said the installation rate for the first half of 2020 still remains "too low". VDMA Power Systems managing director Matthias Zelinger said: "Over the past few months, the federal government has repeatedly made it clear that a sustainable increase in energy supply with renewable energies is wanted.

"The German government's hydrogen strategy sees an additional need for renewable energy plants with a total output of up to 5GW including onshore wind energy for the generation of green hydrogen by 2030. "It would be a contradiction to formulate ambitious climate targets on the one hand, but not facilitate the necessary expansion of renewable generation, on the other.

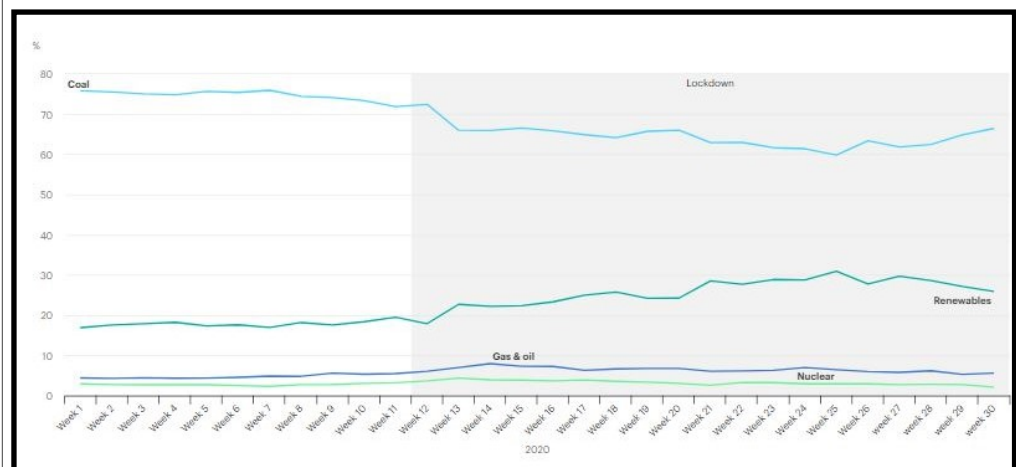
By the mid-2020s, EEG funding for around 15,000 onshore wind turbines will comprise a total output of around 16GW. BWE and VDMA Power Systems have called for a clarity on a repowering strategy geared towards the energy transition.

Source: renews.biz, July 30, 2020

Publications / Regulations

- Benchmark costs for Grid-connected Rooftop Solar Photo-voltaic systems for the financial year 2020-21 , [MNRE](#)
- Guidelines for Implementation of Off-grid Solar Power Packs/Plants in RESCO Mode , [MNRE](#)
- Renewable Energy Statistics 2020, [IRENA](#)

Electricity mix in India, January-July 2020



Source: [IEA](#)