

PERIOD 2025 to 2035

PREPARED BY FESCO WITH FACILITATION FROM ISMO

FAISALABAD ELECTRIC SUPPLY COMPANY

Acknowledgement

The following officers/officials of FESCO developed this Medium-Term Energy and Demand Forecast report under the supervision of Mr. Muhammad Abdullah Dy. Manager (Demand Forecasting) FESCO.

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On the eve of publishing of this report we would like to express our sincere gratitude to ISMO Load Forecast Team comprising Engr. Tauseef ur Rehman Khan, Deputy Director Load Forecast and Mr. Sajid Abrar Assistant Director Load Forecast ISMO their contribution and expertise have been very instrumental and invaluable for the quality of this report. Their devotion and dedication to keep the forecast methodology at par with the best international industrial practices is highly commendable. We highly appreciate the efforts of Power System Planning, ISMO for initiating the forecast process every year and facilitating all DSICOs to ensure the timely completion of the report.

Demand Forecast Team
FESCO

Executive Summary

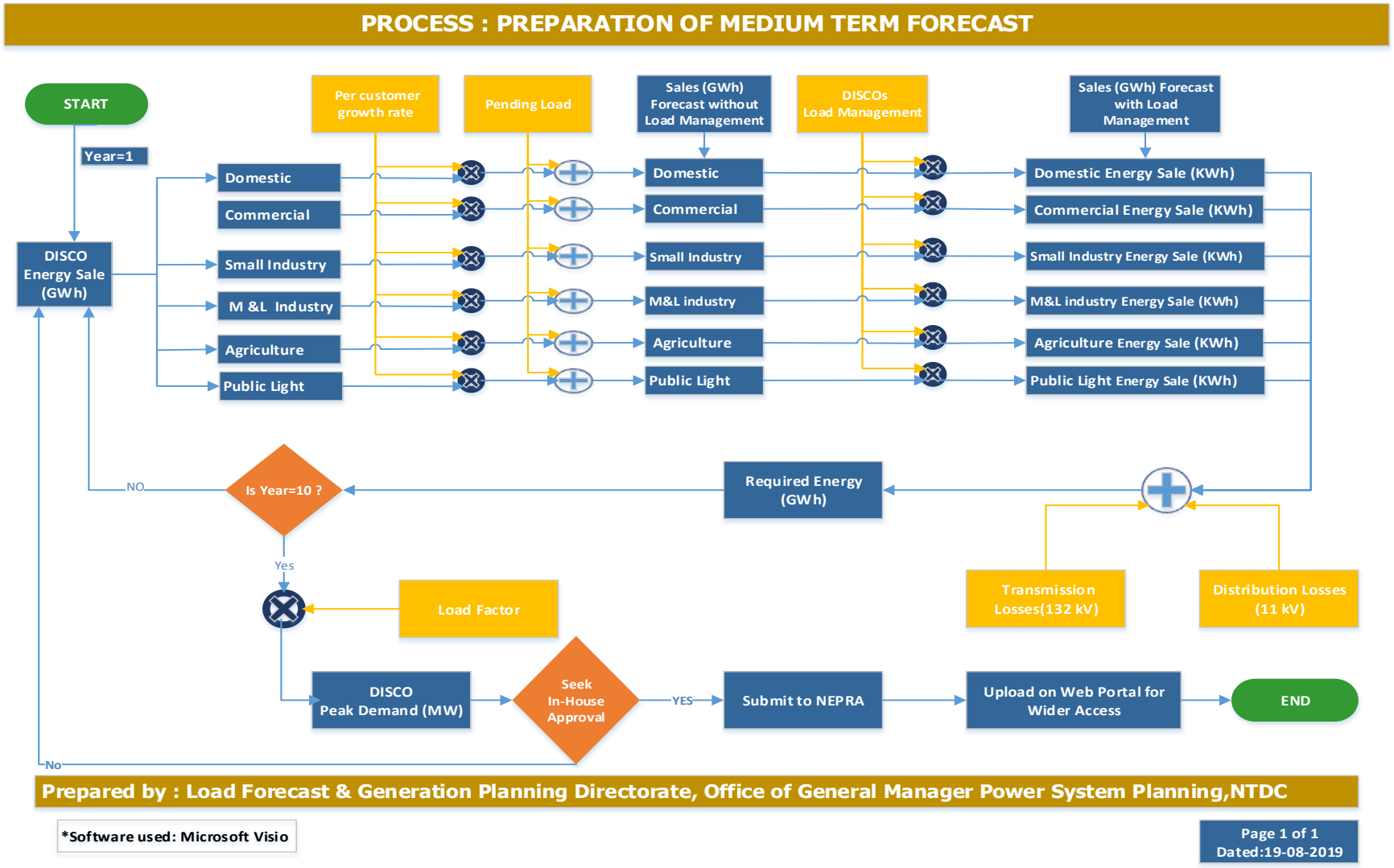
Faisalabad Electric Supply Company (FESCO) is supplying power to civil administrative divisions of Faisalabad and Sargodha and their respective districts. This company came into existence in the year 2001 after unbundling of WAPDA system. Earlier it was known as Faisalabad Area Electricity Board (AEB). In the year 2001, its distribution network comprised Thirty-Eight (38) 132 kV and Thirty-Three (33) 66 kV sub-stations. Presently, it operates Ninety-One (91) 132 kV and Fifteen (15) 66 kV sub-stations.

This forecast is developed by conducting Power Market Survey (PMS), where the bottom-up approach is applied considering the best international practices for the development of ten years forecast which is called Medium-term Load Forecast with facilitation from Independent System Market Operator (ISMO). The year 2024-25 has been taken as the base year and the forecast horizon is ten years up to 2034-35. The base year sale data (consumer-category wise energy sale of each feeder) and the expected spot loads data at the locations of different sub-stations have been collected by FESCO Power Market Survey team besides Transmission & Distribution losses along with the loss reduction plans, historical category-wise sale and number of consumers. Data for the base year has also been adjusted for the estimated amount of un-served energy (load shedding) in order to have realistic figures of energy consumption. Furthermore, this report is updated on yearly basis, in order to capture any potential drastic change in consumer consumption pattern.

In the year 2024-25, peak demand of FESCO was 3030-MW (Recorded), energy sale was 14428-GWh hand energy purchased was 15837-GWh. In the total energy sale for the year 2024-25 the shares of domestic sector and industrial sector were 52% and 34% respectively. The total number of consumers in 2024-25 were 5.74-million, and number of consumers in various categories was 5.12 million in domestic, 0.47 million in commercial, 0.055-million in industrial sector and 0.054-million in agricultural sector.

Forecast results show that in the years 2029-30 and 2034-35 energy sale will be 15908-GWh and 18600-GWh, peak demand will be 3430-MW and 4030-MW, and energy purchased will be 17390-GWh and 20229-GWh respectively. For the period 2024-25 to 2034-35, annual average compound growth rate of energy sale, peak demand and energy purchased will be 2.57%, 2.89% and 2.48% respectively.

Process Map


PROCESS : PREPARATION OF MEDIUM TERM FORECAST
START
Year=1
DISCO Energy Sale (GWh)
Per customer growth rate
Pending Load
Sales (GWh) Forecast without Load Management
DISCOs Load Management
Sales (GWh) Forecast with Load Management
Domestic
Commercial
Small Industry
M &L Industry
Agriculture
Public Light
Domestic
Commercial
Small Industry
M&L industry
Agriculture
Public Light
Domestic Energy Sale (KWh)
Commercial Energy Sale (KWh)
Small Industry Energy Sale (KWh)
M&L industry Energy Sale (KWh)
Agriculture Energy Sale (KWh)
Public Light Energy Sale (KWh)
Is Year=10 ?
NO
Yes
Required Energy (GWh)
Transmission Losses(132 kV)
Distribution Losses (11 kV)
Load Factor
DISCO Peak Demand (MW)
Seek In-House Approval
YES
No
Submit to NEPRA
Upload on Web Portal for Wider Access
END
Prepared by : Load Forecast & Generation Planning Directorate, Office of General Manager Power System Planning,NTDC
*Software used: Microsoft Visio
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Dated:19-08-2019

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1 Introduction

This report is the 33rd edition of Medium-Term Energy & Demand forecast based on Power Market Survey. This forecast prepared by FESCO with the support of ISMO. The report consists of year wise detailed forecast of energy sale and power demand for the whole company and each sub-station within the company's distribution network. In addition, forecast for Civil Administrative areas such as Divisions and Districts served by the company's distribution network is also computed and depicted in different tables. The forecasted peak demand of FESCO has been graphically presented in Figure 1-1

Load forecasting is an important element of the power planning process involving prediction of energy and demand in the future. The forecast serves as the basis for demand and supply-side planning. Load forecasts are typically prepared by utilities for different time frames and the level of details required depends upon different planning applications and operations for which the forecast will be used.

Long term planning requires a system level forecast of total generation requirement and peak demand. On the other hand, transmission and distribution planning requires more load level and geographic details to assess location, timing and loading of individual lines, substations and transformation facilities. The following figure (Figure 1-1) shows the computed peak demand of FESCO for the current forecast period.

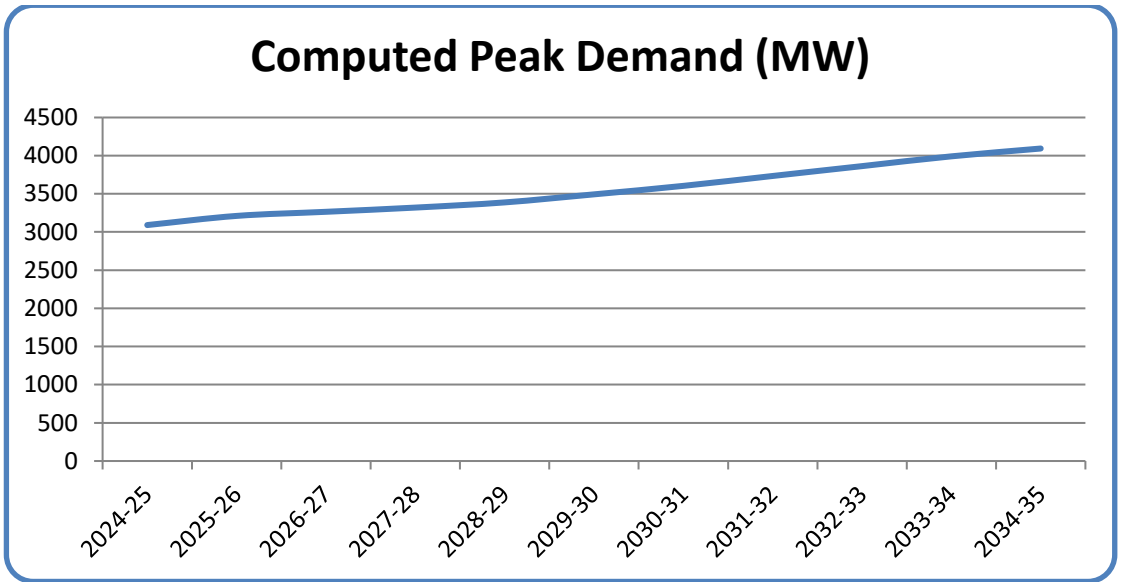


Figure 1-1: Computed Peak Demand Forecast

Forecasting models fall into the following three general categories:

- Trend models
- Econometric based models
- End-use models

Trend forecasts graphically or mathematically extrapolate past electricity demand trends into the future. They may be inadequate for short time periods where demographic changes in the underlying casual factors of load growth are not anticipated. Econometric models represent a more complex 'top-down' approach to forecasting and these models rely on the observed or the implied relationship between past energy consumption and other variables defining past economic output (likewise GDP data), demographics and price or income variables. End-use models relate energy use to the physical appliances stock levels and use patterns or industrial process. These end use models represent a

'bottom-up' forecasting approach and normally incorporate disaggregate end use forecast and consumer survey techniques.

This report has been prepared on the basis of Power Market Survey Methodology and the model used is called Power Market Survey (PMS) model. It uses bottom-up approach. This model is a form of end use model which provides energy and power projections for all distribution companies and all grid stations within a company's distribution network.

The PMS model relies on an extensive data base of historical sales. The data base includes historical figures of consumption by consumer type (i.e. domestic, industrial and commercial etc.) of each feeder of a grid station and overall consumption from a grid station. Actual consumption data is adjusted for un-served demands attributed to load shedding.

Energy forecasts are computed for each consumption category at the sub area level on the basis of a trend analysis of recent per consumer sales plus new consumer connection applications. Industrial forecasts are based on interviews with existing consumers, trend projections and a review of the applications for request of new and increased service. These analyses are repeated for each sub area for each of the years to be forecasted. The annual peak demand is determined from the resulting energy forecasts by using the load factors and diversity factors developed for each consumer category. Forecasts are then aggregated to system level.

Because the PMS forecast is based on a mix of end-use, trend projection and known consumer expansion plans, it cannot be used reliably to predict demand over the longer term. This model had not been created to predict impacts of changes in growth of different economic sectors or consumers categories over time, or changes in both the absolute and relative prices of electricity, and of changes in the relationships between income growth and electricity growth over time as a result of market saturation and technological change (in order to capture these changes NTDC is using another model called regression model). Regression model is used for long term forecasting as the changes in growth are occurred due to change in technology, life style over a longer time period.

The Power Market Survey forecast model most closely approaches the requirements of power system planning. It provides the level of detail required for siting studies and transmission and substation planning as well as the sectoral details necessary to assess different sectors growth rates and their impacts on load shapes for the system, DISCOs and grid stations. In addition, it also provides a reasonable approximation of unconstrained load growth because it makes specific provision for load shedding i.e. suppressed demand.

2 Historical Supply and Demand Analysis

2.1 Category-wise Sale

The customers within the company can be segregated in different categories. The segregation is usually based upon the type of applications for which electricity is being used. Major categories include Domestic, Commercial, Small industries, Medium & Large industries and Agriculture. The category-wise sale (GWh) along with percentage for the years 2014-15, 2019-20 and 2024-25 are given in Figure 1-2.

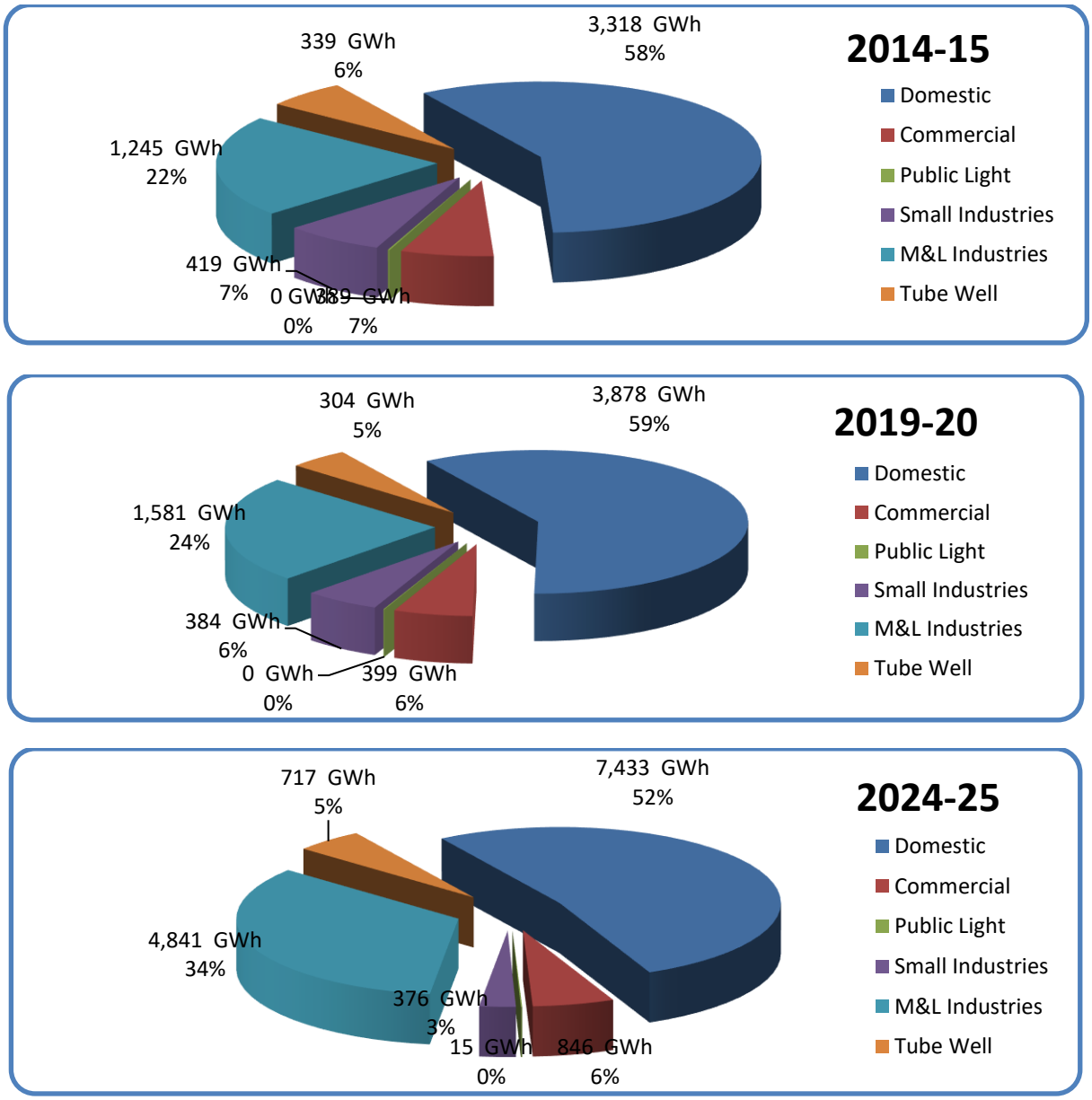


Figure 1-2: Historical Category-wise Sale

Figures of category-wise sale for the last five years i.e. 2020-21 to 2024-25 are given in the table below.
Table 2.1-1: Historical Sale (GWh) of FESCO

Financial Year	Domestic	Commercial	Public Light	Small Industries	M&L Industries	Tube Well	Bulk	Total
2021	6913	1148	13	457	4464	1268	238	14501
2022	7217	1315	18	429	5359	1367	214	15919
2023	6392	1207	17	379	5264	1209	195	14663
2024	6972	1035	17	387	4471	1126	183	14191
2025	7178	1101	15	376	4840	717	201	14428

2.2 Transmission and Distribution Losses

In FESCO's system, losses are divided into two types;

- Transmission Losses
- Distribution Losses

The losses of 132 kV transmission lines are considered as Transmission Losses whereas the losses of 11 kV and 440 Volts lines supplying the consumers are called Distribution Losses. In a system, generally the high losses are due to lack of proper maintenance and element of theft. Reduction in losses can be achieved through installation of properly sized conductors in 11kV feeders and low-tension lines. Installation of capacitor banks to reduce reactive power and thereby improving power factor is also and effective method to reduce line losses. The breakup of energy sent out is shown as Sale, Distribution Losses and Transmission Losses with their percentages in Figure 1-3 for the year 2022-23, 2023-24 and 2024-25.

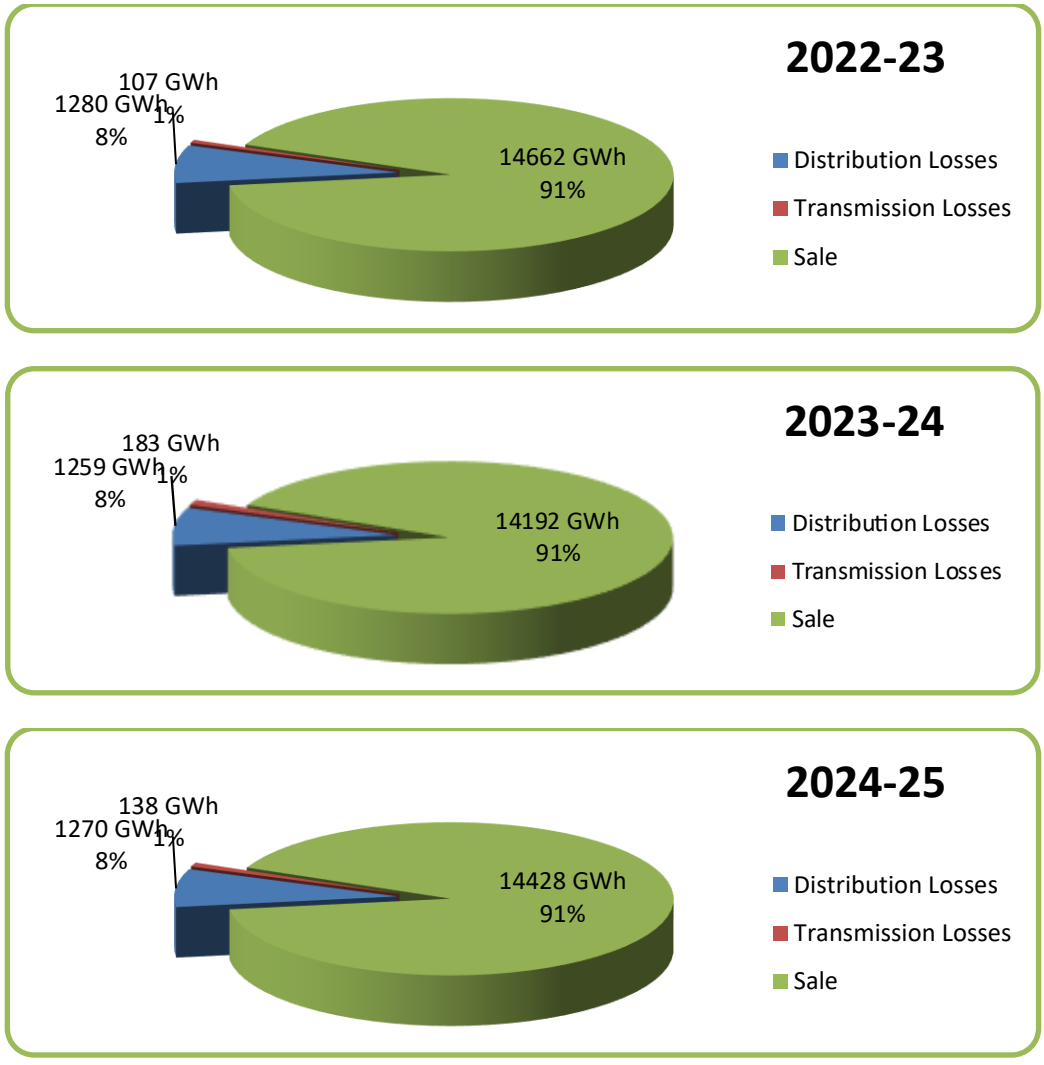


Figure 1-3: Historical Energy Sale and Losses (T&D) with their percentages

2.3 Recorded and Computed Peak Demand

Recorded peak demand is the highest electricity demand or maximum power supplied to the consumers during the base year. Computed peak demand is calculated from the recorded peak demand by adding the element of unserved power to the values of recorded peak demand. Figure 1-4 shows the recorded and computed peak demands (MW) from the year 2020-21 to 2024-25.

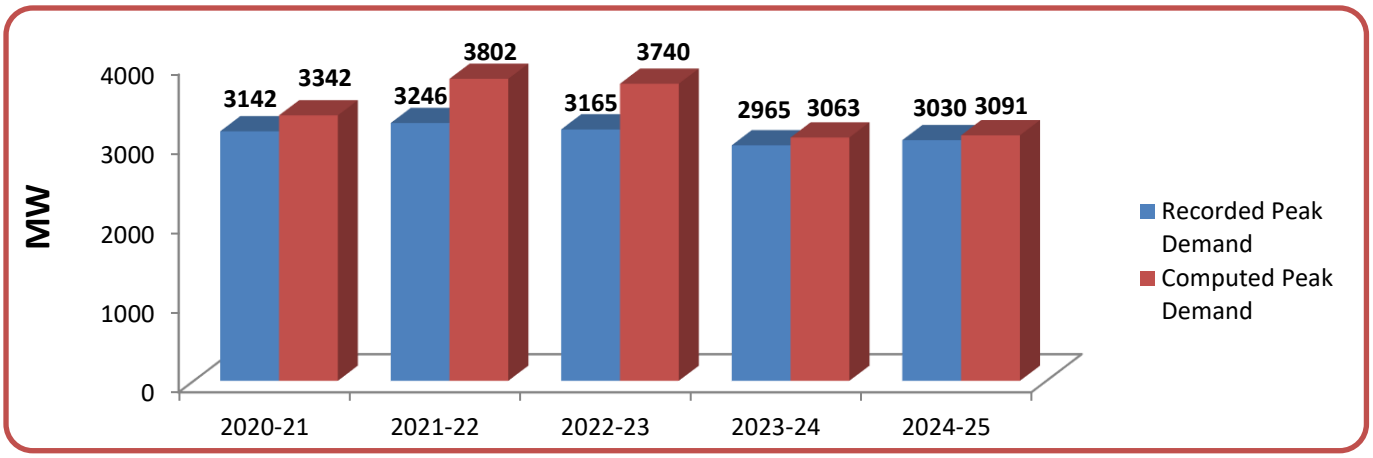


Figure 1-4: Historical Recorded and Computed Peak Demands

Historical figures of recorded and computed peak, energy sale and purchase, losses and load factors for FESCO are given in the following table.

Table 2.3-1: Historical Peak Demand, Energy Sale & Purchase, Losses and Load Factor

Year	Energy Sale	Energy Purchase	Losses		Comp. Energy Purchase	Rec. Peak	Comp. Peak
			11 KV	132 KV			
	GWh	GWh	GWh	GWh	GWh	MW	MW
2021	14501	15984	1258	225	16070	2768	2925
2022	15919	17265	1346	248	17513	3246	3802
2023	14662	16049	1280	107	17118	3165	3740
2024	14191	15920	1297	187	16109	2965	3063
2025	14428	15837	1270	138	16154	3030	3091

2.4 Number of Consumers

Historical figures of number of consumers within FESCO's jurisdiction for the last five years are given in Table 1-5. These figures show the total number of consumers in all consumer categories; i.e. Domestic, Commercial, Small industries, Medium & Large industries, Public Lighting, Bulk and Agriculture. Figure 1-5 shows a regular increase in the number of customers each year.

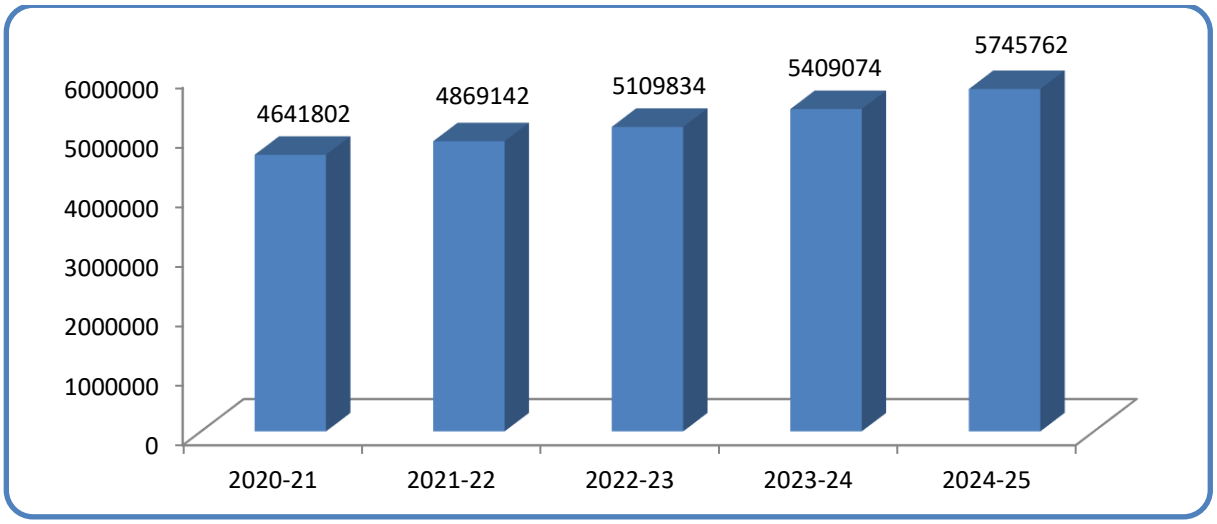


Figure 1-5: Number of Consumers

Category-wise number of consumers for the last five years i.e.2020-21 to 2024-25 is shown in the following table.

Table 2.4-1: Historical Number of Consumers in FESCO

Year	Domestic	Commercial	Public Light	Small Industries	M&L Industries	Tube Well	Bulk	Total
2021	4058205	479548	1882	38532	13668	49738	229	4641802
2022	4266638	495019	1913	39192	14227	51922	231	4869142
2023	4489145	510860	1955	39717	14577	53345	235	5109834
2024	4801242	464115	1987	40375	14790	54328	235	5409074
2025	5128277	472002	2030	40786	14838	54537	224	5745762

2.5 Solar Net Metering

There has been a continuous increase in the number of Net Metering consumers within FESCO. The figure has surged from 82 consumers in 2019-20 to 15,231 consumers in 2024-25, with the installed load also rising significantly from 2.569 MW to 240.30 MW during the same period. The most remarkable growth has occurred in the past two years, with the number of Net Metering consumers escalating from 2,914 to 15,231.

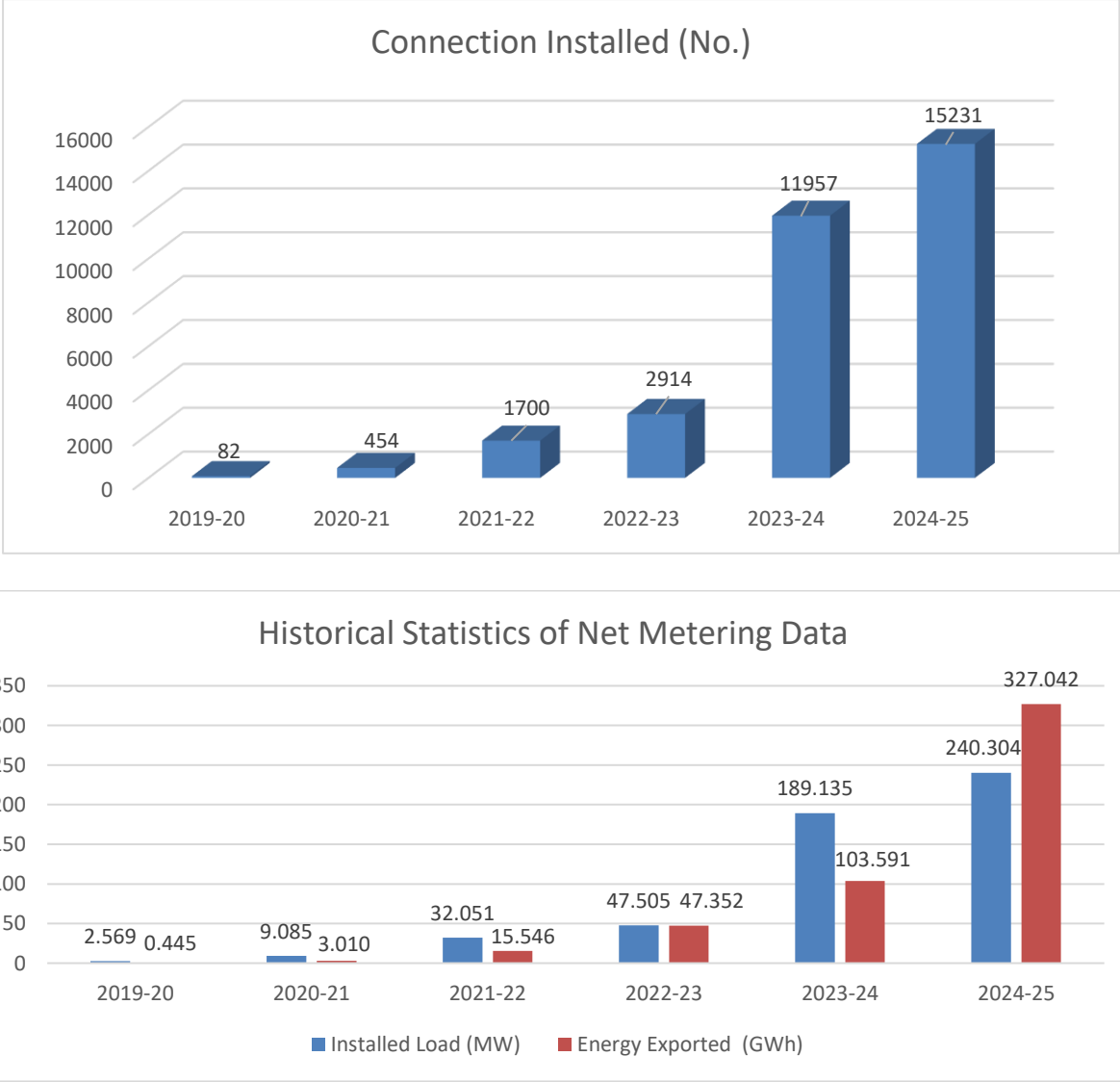


Figure 1-6: Historical Statistics of Net Metering Connection

The energy exported by Net Metering consumers has increased from 103.591 GWh to 327.042 GWh from period 2023-24 to 2024-25.

Table 2-6-1: Historical statistics of Net Metering connections

Historical Statistics of Net Metering Connection			
Year	Connection Installed (No.)	Installed Load (MW)	Energy Exported (GWh)
2018-19	15	0.898	0.062
2019-20	82	2.569	0.445
2020-21	454	9.085	3.010
2021-22	1700	32.051	15.546
2022-23	2914	47.505	47.352
2023-24	11957	189.135	103.59
2024-25	15231	240.304	327.042

2.6 Per Consumer Consumption Trend

The trend of category wise growth rate during last five years is given below in Figure 1-6.

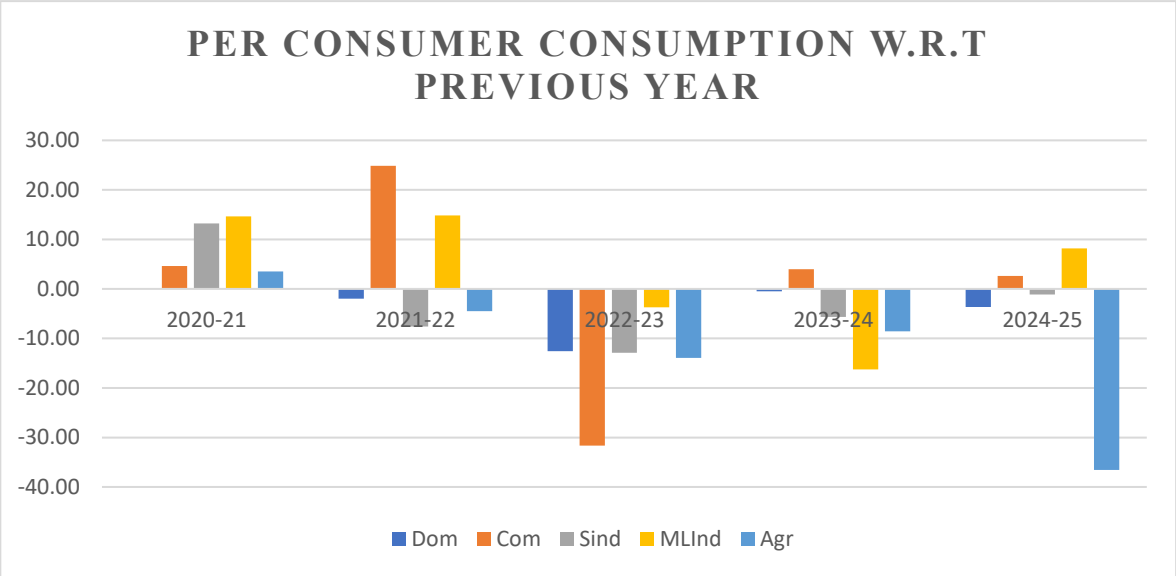


Figure 1-7: Per Consumer Consumption

2.6.1 Overview of Category-wise Growth Trends (2020–21 to 2024–25)

The growth trajectory of electricity consumption in FESCO between 2020–21 and 2024–25 reveals a consistent weakening trend across nearly all consumer categories. Domestic consumption, which had remained broadly stable in the early years of the series, turned negative after 2021–22 and experienced its sharpest contraction in 2022–23 when demand fell by more than twelve percent. Commercial consumption initially displayed a striking surge of nearly twenty-five percent in 2021–22, but this proved unsustainable as the following year recorded a dramatic contraction of over thirty percent. Although some recovery followed, growth in the commercial sector has since remained weak and well below earlier levels.

The industrial categories also show a structural change. Small industries, after a double-digit growth in 2020–21, consistently declined in subsequent years, highlighting the prolonged downturn in the sector. Large industries presented a slightly different trajectory, with strong growth until 2021–22 followed by sharp declines, including a fall of more than sixteen percent in 2023–24, before staging a modest rebound in 2024–25. Agriculture, meanwhile, emerged as the most affected category. After minor fluctuations in the early part of the period, agricultural consumption entered a steep decline, culminating in a collapse of more than thirty-six percent in 2024–25.

Taken together, the overall picture is one of stagnation and decline. Except for occasional short-lived surges, most categories show persistent negative growth. This is not a normal cyclical fluctuation but a deeper structural shift in FESCO's demand base, suggesting that both consumer behavior and energy sourcing are undergoing fundamental change.

2.6.2 Photovoltaic (PV) penetration and self-generation

Among the multiple factors behind this decline, the rapid rise of photovoltaic installations stands out as the most significant. Consumers across domestic, commercial, industrial, and agricultural sectors have increasingly adopted solar systems, which has substantially reduced their reliance on the grid. In the domestic category, rooftop solar combined with net-metering has become an attractive option for middle- and high-income households. This shift explains why, even as households continue to use more appliances, the recorded grid consumption has fallen so steeply. The contraction of more than twelve percent in 2022–23 corresponds with the period of most active solar adoption, when households responded to rising tariffs by investing in rooftop systems that provided free daytime electricity.

The commercial sector has followed a similar path. Many shops, plazas, and service establishments operate primarily during daylight hours, making solar an almost perfect substitute for grid electricity. The extraordinary swing in growth, from a surge of almost twenty-five percent in 2021–22 to a collapse of thirty-one percent the following year, reflects the fact that much of the demand growth previously supplied by FESCO has been replaced by self-generation through PV systems.

Industrial consumers, particularly in Faisalabad's textile belt, have also embraced captive solar power. Large factories, which once contributed to steady growth in grid-based consumption, are now increasingly running significant portions of their operations on self-generated electricity. The figures illustrate this clearly: after two consecutive years of strong industrial growth up to 2021–22, grid consumption began to fall sharply, reaching a negative sixteen percent in 2023–24. This change corresponds with the commissioning of several large-scale

captive solar plants by industrial customers seeking to insulate themselves from high grid tariffs and supply instability.

Agriculture has perhaps been the most visibly affected by solar adoption. Farmers have widely shifted to solar-powered tube wells, both through government-backed initiatives and private investment. For irrigation, solar offers reliability and eliminates dependence on grid supply that is often unreliable during peak seasons. This trend is vividly captured in the data, with agricultural consumption dropping precipitously, culminating in a decline of more than thirty-six percent in 2024–25. This is a structural change rather than a temporary fluctuation, as solar pumping systems now represent a long-term substitution away from the grid.

2.6.3 PV-specific Impacts by Category

The influence of PV installations manifests differently across categories, but in all cases the result is a reduction in metered grid consumption. For households, rooftop solar has altered daily consumption patterns. While demand during evening hours remains dependent on the grid, most daytime needs—such as fans, lighting, and cooling—are increasingly met through self-generation. This has created a "duck curve" effect where daytime grid demand is suppressed, only to rise again once the sun sets.

In the commercial sector, PV adoption has almost perfectly overlapped with load profiles. Offices, shops, and service businesses benefit directly because their operations align with peak solar generation. As a result, grid demand in this category has weakened considerably, with the sector now using the grid mainly for evening operations.

For small industries, rooftop PV systems and shared generation arrangements have become an accessible option, especially given the volatility of tariffs. This explains why growth that was once positive has shifted to consistent decline. Larger industries, on the other hand, have invested in utility-scale captive solar projects. These plants, often supplying several megawatts of capacity, now displace large chunks of grid demand. The transition has been rapid, and it explains the dramatic reversal in growth rates recorded in the data.

In agriculture, the spread of solar tube wells has been transformative. Farmers are no longer as dependent on subsidized or unreliable grid supply, as solar pumping provides both cost savings and operational flexibility. The unprecedented contraction of over thirty-six percent in 2024–25 underscores how deeply solar technology has penetrated this segment. In short, while the magnitude varies by category, PV adoption has reshaped load patterns across all consumer groups.

2.6.4 Conclusion

The analysis of category-wise growth in electricity consumption for FESCO between 2020–21 and 2024–25 highlights a decisive structural transition. What was once a system characterized by steady or modestly rising demand has now shifted into a phase of persistent decline. While several factors—including tariff escalation, economic slowdown, and efficiency improvements—contribute to this outcome, the dominant explanation lies in the rapid spread of photovoltaic installations across all consumer categories.

Households have reduced their dependence on the grid by installing rooftop solar, businesses have cut daytime demand through self-generation, industries have invested in large-scale captive PV plants, and farmers have solarized irrigation pumping. These shifts collectively explain why domestic consumption has fallen into negative territory, why commercial demand has swung dramatically, why industrial growth has collapsed, and why agriculture has recorded the steepest declines of all.

For FESCO, the implications are profound. The company is now operating in an environment where organic demand growth can no longer be taken for granted. Instead, distributed generation is displacing grid sales, flattening daytime demand, and creating new challenges for revenue sustainability and system management. The evidence suggests that this is not a temporary cycle but a lasting transformation in the electricity landscape. Unless new strategies are adopted—such as tariff restructuring, service diversification, and integration of distributed resources—FESCO's traditional growth model will remain under pressure. The data therefore confirms that photovoltaic adoption is the single most important driver of the observed downward trend and will continue to shape the future of electricity consumption in the region.

2.7 Impact of Electric Vehicles on FESCO Power & Energy Demand (2025–2034)

This report quantifies projected incremental annual energy (GWh) and coincident peak charging load (MW) due to Electric Vehicles (EVs) — two-wheelers and four-wheelers — across FESCO's service area (Faisalabad, Sargodha, Jhang, T.T. Singh, Chiniot, Mianwali, Bhakkar, Khushab) for 2025–2034.

Using the locked assumptions, combined EV annual energy grows from ~5.10 GWh in 2025 to ~35.41 GWh in 2034. Combined coincident EV peak grows from ~7.02 MW (2025) to ~48.08 MW (2034). At system scale these contributions are modest (< ~1% energy, < ~2% peak by 2034), but localized distribution impacts (transformer/feeder level) may be important in high-growth districts.

The forecast uses the confirmed locked dataset with precise arithmetic checks:
- FESCO service area (8 districts)
- Period: 2025–2034
- Year-0 fleets: Cars (4W) = 2,200; Scooters (2W) = 24,000
- New registrations baseline: Cars = 200/yr; Scooters = 4,000/yr; annual escalation rates: Cars +25%, Scooters +40%
- Energy intensity: Cars = 0.15 kWh/km; Scooters = 0.015 kWh/km
- Annual km: Cars = 10,000; Scooters = 5,000
- Charger power: Car = 7.0 kW, Scooter = 0.5 kW
- Peak coincidence: Car = 30%, Scooter = 20%

The main Forecast Table: EV Adoption and Demand (2025–2034) is as under:

Year	2W Nos	2W MW	2W GWh	4W Nos	4W MW	4W GWh
2,025	24,000	2.400	1.800	2,200	4.620	3.300
2,026	29,600	2.960	2.220	2,450	5.145	3.675
2,027	37,439	3.744	2.808	2,762	5.800	4.143
2,028	48,414	4.841	3.631	3,152	6.619	4.728
2,029	63,780	6.378	4.784	3,640	7.644	5.460
2,030	85,292	8.529	6.397	4,250	8.925	6.375
2,031	115,410	11.541	8.656	5,012	10.525	7.518
2,032	157,575	15.758	11.818	5,965	12.527	8.947
2,033	216,606	21.661	16.245	7,157	15.030	10.736
2,034	299,250	29.925	22.444	8,647	18.159	12.970

Two-wheelers dominate numerically but have a small per-unit energy draw, so total MW/GWh impact is modest. Four-wheelers, while fewer, have a far greater per-unit load and energy use. The combined EV impact grows steadily over the decade but remains a small share of system totals.

3 Power Market Survey Methodology

3.1 Overview

The Power Market Survey Model forms the basis of the Medium-Term Forecast. It produces energy and peak demand forecast for each consumer category and grid station for the entire service area over a period of ten years. The model has three inter-related components: the main database, the basic input parameters and the calculations.

A huge energy consumption database has been developed through the Power Market Survey. The database contains base year consumption data for existing consumers and ten years' forecast data for new consumers for each consumer category within the company. In addition, there is separate information for peak demand in medium & large industries and traction categories. Because of its huge volume, this data is not listed as part of the report.

In addition to the database, a number of basic input parameters are separately prepared for each DISCO which forms an integral part of the forecast model. These include:

- **Growth Rates:** The annual increase in consumption per consumer-by-consumer category
- **Loss Rates:** Transmission and Distribution Losses expressed as a percentage of energy purchased and energy sold, respectively
- **Load Factors:** It expresses the ratio of the amount of energy actually generated to the amount that would have been generated, had the peak demand been continued over the entire period.
- **Coincidence Factors:** Describing the load diversity within the system.

The forecast calculations within the model combine the energy consumption data and the input parameters to compute the energy and peak demand requirements within each area for each year to be forecasted. The basic data unit is an area. The data is accumulated from the area basis to grid stations, then to DISCOs and ultimately combined to produce a forecast for the entire system. A detailed discussion of each of the three model components is given below.

3.2 Survey Base Data

An extensive database has been developed on gross consumption by consumer category such as household (domestic), commercial, small industrial, large industrial, tube wells (agriculture), public lighting, and traction (electric rail). Energy consumption figures come from consumer service meter readings. Maximum demand readings and load factors for large industrial consumers and other demand-

meteredconsumers are based on service meter readings. The consumption data is collected from Computer Centers of each DISCO (It is category-wise consumption data of each feeder). The database also contains data regarding un-served demands attributed to load shedding.

The basic geographic unit represented within the database is called an area, although many areas are divided into two or more subareas. This occurs when portions of the area are served by different feeders or where a single feeder services different administrative district. Each area is assigned a series of codes which identify the technical boundaries associated with the area.

The technical boundaries, which are emphasized in this report, start at the grid station. Thus, all areas and subareas are assigned to one of the sub-stations in each DISCO. These are distribution grid stations supplying power at 11 kV after transformation from a 132kV or 66 kV source. Grid stations are combined to form a DISCO.

There can be up to eleven records in the data base for each area or subarea, one record for each year of forecast. The first year is typically year zero and records the base year level of consumption for each consumer category. The remaining records for the area list the incremental consumption associated with new consumers to be added to the area within the specified year.

This incremental consumption is based on applications for new or extended service which are filed at each revenue office and from discussions with the relevant industries and government agencies. Incremental industrial consumption is based on a combination of interviews, trend projections, and reviews of applications for new and/or increased service. Interviews are held with major industrial consumers to identify their current capacity utilization and any long-term plans they have for future expansion or changes in their electricity consumption. In addition, the various branches of the Ministry of Industries are interviewed to determine the number of applications received for new developments or plant expansions and the anticipated electrical load associated with each development or expansion. These anticipated new demands are added to the basic forecast of industrial consumption.

Extension of electricity to new areas over the forecast period is dealt with separately. The number of new communities to be electrified is also obtained. Initial loads and load growths are calculated based on past experience in terms of market penetration and consumption per consumer in newly electrified communities. This analysis is conducted at DISCO level.

3.3 Input Parameters

A number of input parameters are defined in order to use these in the Power Market Survey model. These parameters are:

- Transmission and Distribution Losses
- The Growth Rates in consumption per consumer for each category
- Load Factors for each consumer category
- Coincidence or Diversity Factors
- Load Shedding or Un-served Energy

The definition and basic derivation of each parameter is discussed below.

3.3.1 Growth Rates

The forecast calculations, as will be discussed below, use per consumer growth rates to update the previous year's consumption before adding the incremental consumption estimate for the current year. The Power Market Survey model requires per consumer growth rates to be specified by DISCO for each consumer category (domestic, commercial, etc.). The rates selected for the forecast are based on average annual compound growth rates, calculated from the last five years data of each consumer category in each DISCO.

3.3.2 Losses

For every 100 units of electricity purchased from a power station only 85 to 90 units are actually sold to the ultimate end-user. The remaining units are consumed by the power system itself during transmission and distribution of the sold energy. The transmission and distribution losses must be added to the sales forecast in order to determine the total generation requirement for the system. An additional source of "loss" is the consumption in auxiliaries (also called station service) used by the power plants in the process of generating electricity. Auxiliary consumption cannot be avoided and is totally dependent on the type of generation. For example, a thermal plant would have a higher auxiliary consumption than a hydro plant to account for the energy consumed by fuel and waste handling systems. Auxiliary losses are determined and incorporated in the forecast outside the model. However, presently as the power is purchased at the bus bar level so the energy consumption in auxiliary is not calculated.

The Power Market Survey model handles Distribution and Transmission losses in such a manner that Distribution losses are expressed as a percentage of Sales and Transmission losses are expressed as a percentage of the energy purchased from the generating stations. The model is capable of handling different loss rates of each year for each DISCO. The Distribution and Transmission losses used in the Power Market Survey Model are based on the review of current loss rates and an evaluation of existing loss reduction initiatives within the Distribution Network of the DISCO. The proposed losses (Distribution losses at 11kV and Transmission losses at 132 kV) are applied DISCO-wise. Previously a separate excel sheet was used outside the model to calculate the loss rates needed for the model. Now a separate module has been incorporated in the model to adjust 132 kV and 11 kV received and sale of a DISCO. This model simulates sale, Distribution losses and Transmission losses of a DISCO. It also includes the loss reduction program.

3.3.3 Load Factors

Energy sale in each consumer category is converted to peak power demand through the use of a load factor. It expresses the ratio of the amount of energy actually generated to the amount that would have been generated, had the peak demand been continued over the entire period. Load factors can be calculated over any time period but the most common are daily, weekly and annual.

The load factors utilized in the Power Market Survey Model relate annual energy sales to peak capacity for each consumer category (domestic, commercial, public lighting, small industries and private tube wells). Input load factors are not required for medium/large industry, public tube well and traction sales as consumption for these sectors is provided through the survey in both energy and power terms.

Maximum demand readings are available directly for large industrial and other demand metered consumers such as public tube wells. Load factors for non-demand metered consumers are determined on a sample basis. For example, peak demand is based on maximum demand readings from substation feeders which are identified as serving predominantly one sector.

Domestic and commercial load factors are differentiated by community size (village, town or city). Whereas a single load factor is used for small industrial, private tube wells, public lighting and traction because of the similar nature in the operation of these loads.

3.3.4 Coincidence Factors

The total energy demand of a number of individual consumers is determined as the simple sum of their individual energy consumption values. The total peak load, however, is calculated as the diversified sum of their individual peak load levels. The coincidence factor, as its name implies, is a general term which measures the coincidence between the peak loads of any number of individual consumers or consumer groups over a specified time period in order to compute a combined peak. Mathematically, it is the inverse of the diversity factor.

The daily coincidence factor is determined by comparing the daily load patterns of each consumer or group under consideration. In this case, the sum of the individual hourly (or 15-minute) peaks would determine the overall daily load pattern and the overall peak load. Suppose one consumer (or group) consumes energy only in the morning and a second consumer (or group) consumes energy only in the

evening, the coincidence factor between these two consumers would be zero and the peak load of the combined group would be the peak of the larger consumer. Conversely, if both groups consumed all energy at the same hour, the coincidence factor would be one and the combined peak would be the sum of the two peaks. In practice, the coincidence factor is found between these two extremes.

Coincidence factors can be determined between any group and sub-group of consumers whether it is domestic versus commercial or Lahore versus Islamabad, provided that reasonable estimates of the appropriate load patterns are available. Typically, these patterns are not readily available and must be synthesized from incomplete or estimated data. In addition, all coincidence factors calculated from these load patterns are approximations of the corresponding instantaneous peak faced by the system. In fact, a common practice is to define this instantaneous peak as the bench mark and specify all coincidence factors in relation to this peak and time. The advantage of this approach is that all peak can be easily converted into their contribution to the overall system peak, the disadvantage is that the relationship between any two groups cannot be so clearly specified and will likely be incorrectly specified.

The Power Market Survey Model depends upon specified coincidence factors between consumption categories and between consumption areas in the aggregation of peak loads from consumers to the peaks at grid stations and at DISCO level and at the level of overall system peak. The coincidence factors estimated for the medium-term model have been based on the limited available System records of the peak loads at various points in their respective systems.

3.3.5 Load Shedding

Over the course of time load forecast is gaining high importance as a lot of policy decisions and approval for installation of new power plants depend on them. We are going through critical times and one major challenge is huge capacity payments we are facing today. These things urge us to do forecast with great attention and there should not be redundant generating units committed in the future. In this regard the Load Forecast and Generation Planning team from ISMO had numerous meetings and discussions with MoE and it was mutually agreed that any further expansion in transmission network should be based on rationalized forecast numbers.

3.4 Forecast Calculations

The forecast calculations involve three basic steps. Firstly, an energy forecast is determined at the area (or subarea) level using per consumer growth rates and incremental consumption estimates from the data base. This is then converted to a peak demand forecast, again at the area (or subarea) level using the input load and diversity factors. Then transmission and distribution losses are added, and final step is to accumulate the areas into their corresponding grid stations, and grid stations into their DISCO and finally all DISCOs to form the system.

3.5 Energy Calculations

The basic calculation unit is the area or subarea where applicable. The database provides the base year energy consumption level for each of the six consumption categories (Domestic, Commercial, Public Lighting, Small Industry, Private Tube Wells and Medium & Large Industry). The database also includes the peak demand associated with the medium and large industry category. The domestic energy forecast for year 1 (the base year is indicated as year 0) is calculated by multiplying the base year consumption by the domestic per consumer growth rate to account for growth in the intensity of use in the sector, and then incremental consumption listed in the database is added to account for new use in the sector. This process is repeated for the remaining five energy sectors (plus the medium and large industrial demand) for the entire forecast period (remaining 10 years). The total energy consumed in the subarea for each year of the forecast period is then computed.

3.6 Peak Demand Calculations

The annual energy sale values for each of the consumer category (domestic, commercial, public lighting, small industry and private tube well) are converted to peak demand using the load factors listed in the appropriate input parameter file and then adjusted to account for coincidence within the category. The annual peak demand for the subarea is computed as the sum of the individual category peaks multiplied by coincidence factors within the subarea. The sub area peak demands are accumulated to an area by applying proper coincidence factors.

3.7 Accumulations

The total energy and peak demand at a given grid station is calculated as the sum of all the areas and subareas in that grid station's service area plus an allowance for distribution losses. Peak demand estimates are accumulated, and different coincidence factors applied to city, town and village areas within the service area. The total energy and peak demand within a given DISCO is the sum of all grid stations in that DISCO plus traction and an allowance for transmission losses. Peak demands are again diversified in the accumulation, and the system totals are obtained from DISCO's total with some coincidence.

4 PMS Forecast Results

4.1 Recorded Forecast& Computed Forecast

The term 'Recorded Forecast' means the energy sale figures used in the forecast has not been adjusted for un-served energy (load shedding). Forecasted sale, growth rates, transmission and distribution losses, generation requirement and peak demand without incorporating load shedding has been shown in Table 1-1. This forecast is also called the Low Forecast.

The term 'Computed Forecast' means the energy sale figures used in forecast have been adjusted for un-served energy (load shedding). Forecasted energy sale, growth rates, transmission and distribution losses, generation requirement and peak demand with incorporating load shedding has been shown in Table 1-2 for Computed Forecast.

Peak demand of this table has been demonstrated graphically in Figure 1-8. Similarly, energy sale and energy purchased also have been shown in Figure 1-9.The difference between energy purchased and energy sale shows all losses of the DISCO. This forecast is also called the Base Forecast. If there had not been the load shedding, the recorded forecast (Low Forecast) would have been the actual forecast i.e. the Base Forecast.

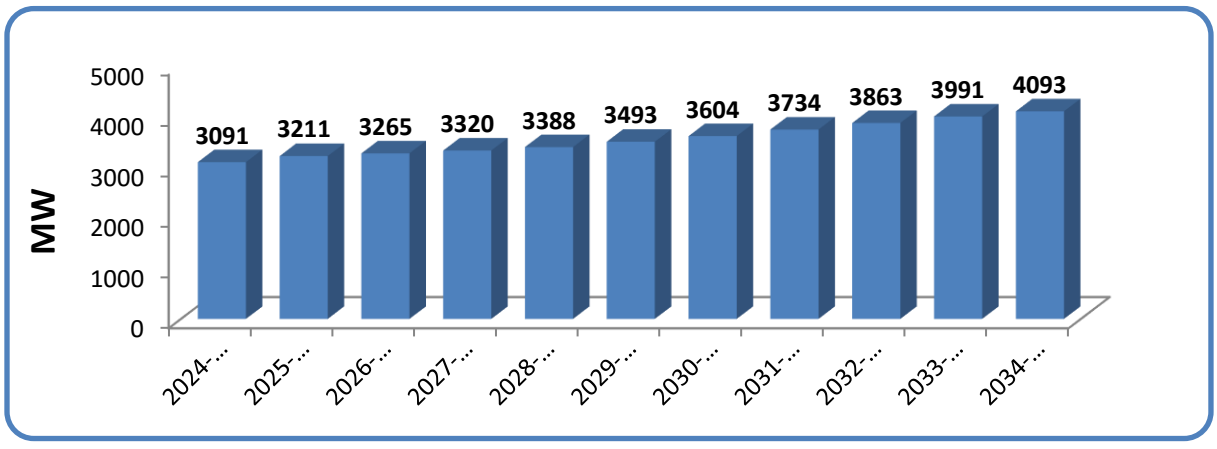


Figure 1-8: Computed Peak Demand

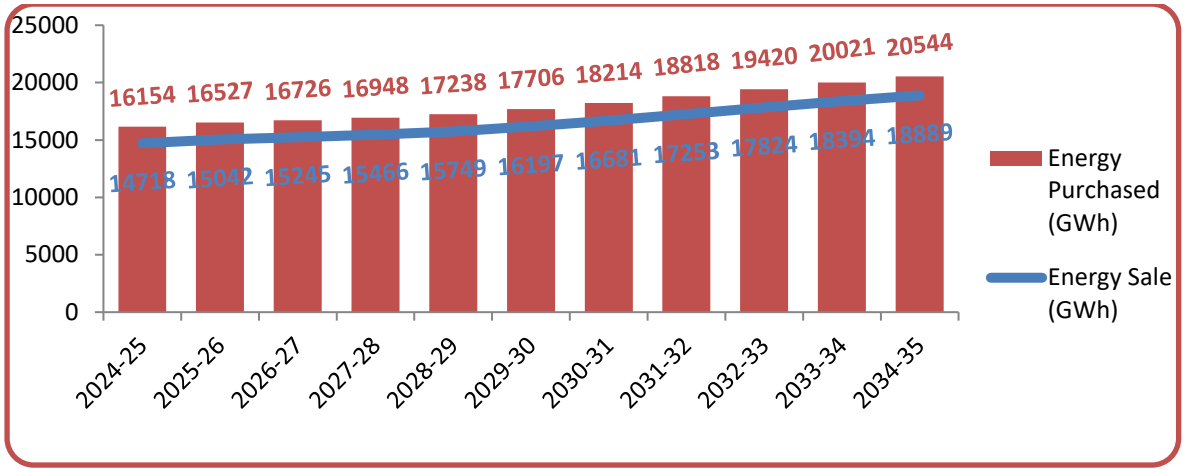
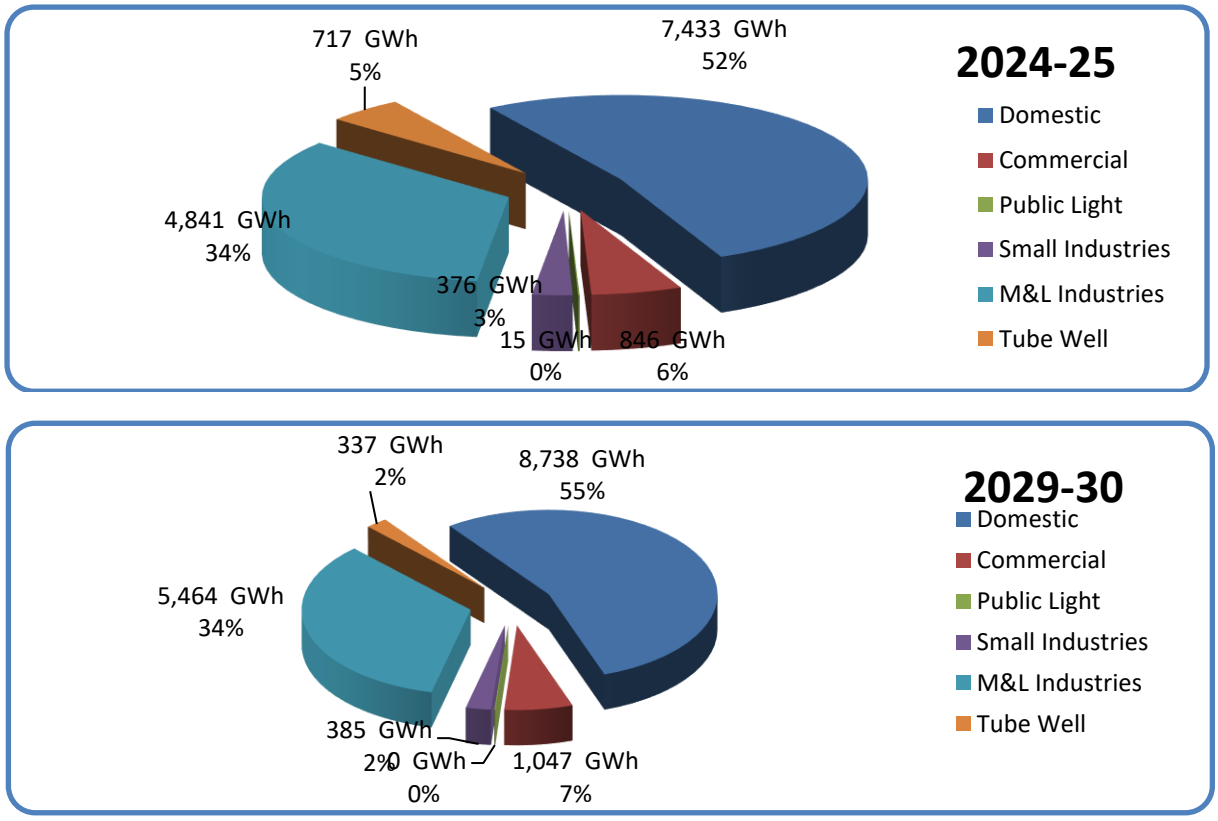


Figure 1-9: Energy Purchased Vs Energy Sale

4.2 Category-wise Forecasted Energy Sale (GWh)

Amount and percentage share of each consumer category in the total consumption for the year 2024-25, 2029-30 and 2034-35 have been depicted in Figure 1-10.



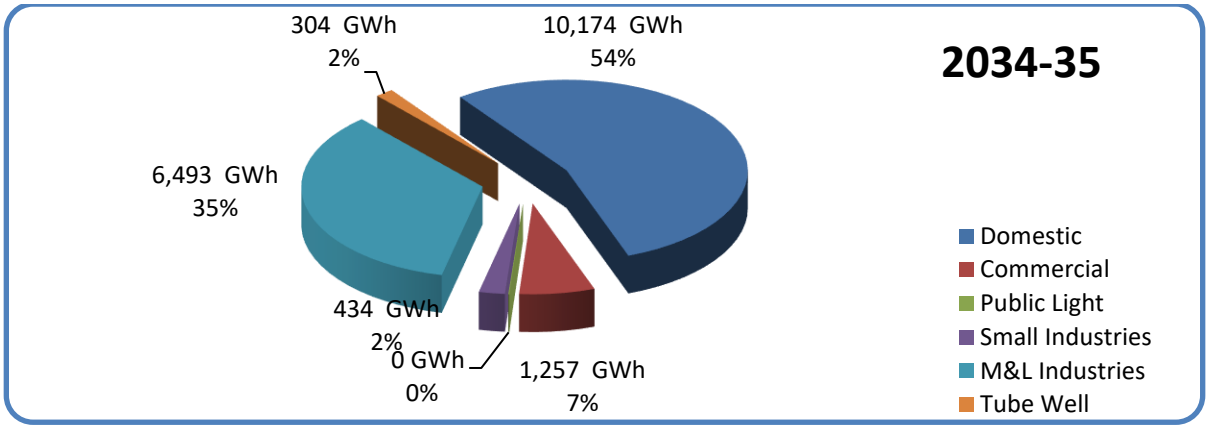


Figure 1-10: Forecasted Category Wise Sale

The category-wise forecasted sale without incorporating load shedding (Low Forecast) is shown in Table 1- 3.The category-wise forecasted sale with incorporating load shedding effect (Base Forecast) is shown in Table 1-4

4.3 Category wise Forecasted Demand (MW)

The forecast of consumption (Demand) in MW without and with incorporating load shedding impact is shown in Table 1- 5 and Table 1- 6 respectively.

4.4 Civil Administrative Area Forecast

The FESCO service area comprises of two civil administrative divisions i.e. Faisalabad and Sargodha which comprises of 8 districts, Faisalabad, Chiniot, Jhang, T.T. Singh, Sargodha, Khushab, Mianwali and Bhakkar. The civil administrative Division-wise and District-wise energy and demand projections have been presented in Table 1- 7 to Table 1- 16. The last column of the table contains peak demand.

4.5 Monthly Demand (MW) and Energy (GWh) Purchase Projections

The Month–wise demand (MW) and energy (GWh) purchase projections have been presented in Table 1-17and Table 1-18. To develop the projection, monthly demand and energy factors are computed for last five years and then its average is taken as a base factor for monthly demand and Energy projection. For this, each month peak is calculated from the ratio of the historical peak of that particular month to the annual historical peak of that year. Whereas each month Energy purchase is calculated from the ratio of historical monthly energy purchase of that particular month to annual energy purchase of that year. In this manner, historical ratios are calculated for each month of the last five years. The average of these values is taken as the monthly factor and multiplied with the peak demand of the year to obtain monthly peak demand and energy purchase.

4.6 List of Overloaded Substations

The list of overloaded substations will inform about that particular year in which a substation will be overloaded. The overloading criterion of a substation has been considered as 85% i.e. when any substation is 85% loaded, the remedial measures should be taken in the form of new substation or augmentation of the existing transformers. Table 1- 19 & Table 1- 20 show the lists of overloaded substations based on overloading criterion of 85% and 100% respectively. Based on the overloading criterion of 85%, the numbers of overloaded substations are 18 and if we consider 100% overloading criteria, there would be 10 overloaded substations upto 2034-35.

4.7 List of Grids with their Codes and MVA Capacities

The list of substations in a DISCO mentioning number of transformers with MVA capacities at each substation is provided in Table 1- 21.

4.8 Peak Demand of Substations

A projection of peak demand at a substation is the most peculiar feature of this report. It is indeed a very rare and useful forecast. It provides the basis for transmission system expansion planning. It also provides a very solid ground for proposing a new substation or augmentation, extension and conversion of a sub-station. Only distribution losses have been considered in preparing the grid station peak demand forecast. The peak demand of each substation, existing as well as proposed, situated in the service area of the DISCO has been shown in Table 1-25. The proposed substations during the present period have also been incorporated in this table. The demand of the proposed substations is shown on the existing grids before the commissioning of proposed substation and it is shifted to the proposed substation after its commissioning year.

4.9 Peak Demands of existing, transit and proposed grids (Family of Grids)

This report also shows the projection of peak demands of existing substations as well as the demands that will be transferred to the proposed substation at when commissioned. This is also a very important forecast to accurately plan the capacity of the proposed substations as well as the status of the existing substation after the load is transferred to the proposed substation. It accurately forecast the demand in MW that will be transferred from one existing grid to the proposed grid and as well as the total load that will be transferred to the proposed grid. The peak demands of existing, transit and proposed grids are shown in Table 1- 23.Transit grid is a new term introduced in the current issue of the report. It is a virtual or temporary substation with a particular name and number on which the necessary load from one overloaded substation is shifted temporarily during base year. In Table 1- 23, the proposed grids are shown with zero loads and the transit grid shows the estimated load that will be shifted from one existing substation to the proposed grid when it is commissioned. This table helps in finding out the amount of load in the future that will be shifted to the proposed grid from the existing grid when it is commissioned.

4.10 Category-wise Energy and Maximum Demand Projections for each Substation

The category-wise energy and maximum demand projections for each substation have been presented in Table 1- 24**.** The last two columns of the table contain power factor and reactive power values. The maximum demand for the DISCO in this table is the diversified sum of the individual peak demands of each substation and this figure will coincide with the peak demand of the respective year. In order to reduce the volume of the report, only the values of the last year i.e. 2034-35 have been presented in the table.

Table 1- 1: Forecast without incorporating Load Shedding effect - Low Forecast

Year	Energy Sale		Distribution Losses		Energy Received at 11 kV	Peak Demand at 11 kV	Transmission Losses		Energy Sent out at 132 kV	Load Factor	Peak Demand at 132 kV
	(GWh)	G.R	(GWh)	(%)	GWh	MW	(GWh)	(%)	(GWh)	(%)	(MW)
2024-25	14428		1270	8.1	15699	3004	138	0.87	15837	59.7	3030
2025-26	14753	2.2	1212	7.6	15965	3101	244	1.51	16209	58.8	3149
2026-27	14956	1.4	1207	7.5	16163	3154	246	1.50	16408	58.5	3202
2027-28	15177	1.5	1207	7.4	16384	3209	247	1.49	16631	58.3	3257
2028-29	15459	1.9	1211	7.3	16671	3276	250	1.48	16921	58.1	3325
2029-30	15908	2.9	1227	7.2	17135	3380	255	1.47	17390	57.9	3430
2030-31	16391	3.0	1246	7.1	17637	3490	261	1.46	17898	57.7	3541
2031-32	16963	3.5	1271	7.0	18235	3618	268	1.45	18503	57.5	3671
2032-33	17534	3.4	1296	6.9	18830	3745	275	1.44	19105	57.4	3800
2033-34	18105	3.3	1319	6.8	19424	3872	282	1.43	19706	57.3	3928
2034-35	18600	2.7	1342	6.7	19942	3973	287	1.42	20229	57.3	4030
Ave. Growth (2025-2035)	2.57%				2.42%	2.84%			2.48%		2.89%

Table 1- 2:Computed Forecast (Base Forecast)

Year	Computed Sale	G.R	Distribution Losses		Energy Received at 11 kV	Peak Demand at 11 kV	Transmission Losses		Energy Sent out at 132 kV	Load Factor	Computed Peak Demand at 132 kV	G.R
		(%)	(GWh)	(%)	GWh	MW	(GWh)	(%)	(GWh)	(%)	(MW)	(%)
2024-25	14718		1296	8.1	16014	3064	141.0	0.87	16154	59.7	3091	
2025-26	15042	2.2	1235	7.6	16278	3162	249.0	1.51	16527	58.8	3211	3.9
2026-27	15245	1.3	1230	7.5	16475	3216	250.4	1.50	16726	58.5	3265	1.7
2027-28	15466	1.5	1230	7.4	16696	3270	252.1	1.49	16948	58.3	3320	1.7
2028-29	15749	1.8	1234	7.3	16983	3338	254.7	1.48	17238	58.1	3388	2.0
2029-30	16197	2.8	1250	7.2	17446	3442	260.0	1.47	17706	57.9	3493	3.1
2030-31	16681	3.0	1268	7.1	17949	3552	265.6	1.46	18214	57.7	3604	3.2
2031-32	17253	3.4	1293	7.0	18546	3680	272.6	1.45	18818	57.5	3734	3.6
2032-33	17824	3.3	1317	6.9	19141	3807	279.5	1.44	19420	57.4	3863	3.5
2033-34	18394	3.2	1341	6.8	19734	3934	286.1	1.43	20021	57.3	3991	3.3
2034-35	18889	2.7	1363	6.7	20252	4035	291.6	1.42	20544	57.3	4093	2.6
Ave. Growth (2025-2035)	2.53%				2.38%	2.79%			2.43%		2.85%	

Table 1- 3: Category Wise Sale – GWh without incorporating Load Shedding effect (Low Forecast)

Year	Domestic		Commercial		Public Light		Small Industries		M&L Industries		Tube Well		Bulk		Total	
	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R
2024-25	7433		846		15		376		4841		717		201.0		14428	
2025-26	7648	2.9	882	4.3	14	-6.6	368	-2.0	5021	3.7	613	-14.5	206.0	2.5	14753	2.2
2026-27	7866	2.9	917	4.0	14	-2.9	363	-1.6	5065	0.9	524	-14.4	206.0	0.0	14956	1.4
2027-28	8078	2.7	953	3.9	14	2.2	364	0.5	5112	0.9	449	-14.3	206.0	0.0	15177	1.5
2028-29	8287	2.6	990	3.9	14	2.3	370	1.4	5207	1.9	386	-14.2	206.0	0.0	15459	1.9
2029-30	8582	3.6	1029	3.9	15	2.3	379	2.4	5366	3.1	331	-14.1	206.0	0.0	15908	2.9
2030-31	8876	3.4	1068	3.8	15	2.3	388	2.4	5554	3.5	285	-13.9	206.0	0.0	16391	3.0
2031-32	9167	3.3	1108	3.8	15	2.2	397	2.5	5781	4.1	289	1.3	206.0	0.0	16963	3.5
2032-33	9453	3.1	1150	3.8	16	2.2	407	2.4	6010	4.0	292	1.2	207.0	0.5	17534	3.4
2033-34	9737	3.0	1193	3.7	16	2.2	417	2.5	6239	3.8	296	1.2	207.0	0.0	18105	3.3
2034-35	10018	2.9	1237	3.7	16	2.2	427	2.5	6394	2.5	300	1.2	207.0	0.0	18600	2.7
Ave. Growth (2025-2035)	3.0%		3.9%		0.8%		1.3%		2.8%		-8.4%		0.3%		2.6%	

Table 1- 4: Category Wise Sale (GWh)- Base Forecast

Year	Domestic		Commercial		Public Light		Small Industries		M&L Industries		Tube Well		Bulk		Total	
	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R	(GWh)	G.R
2024-25	7582		863		15		384		4938		731		205		14718	
2025-26	7798	2.9	900	4.3	14	-6.6	376	-2.0	5120	3.7	625	-14.5	210	2.4	15042	2.2
2026-27	8019	2.8	935	3.9	14	-2.9	370	-1.6	5163	0.9	535	-14.4	210	0.0	15245	1.3
2027-28	8232	2.7	972	3.9	14	2.2	371	0.4	5209	0.9	458	-14.3	210	0.0	15466	1.5
2028-29	8442	2.5	1009	3.9	14	2.2	376	1.4	5304	1.8	393	-14.2	210	0.0	15749	1.8
2029-30	8738	3.5	1047	3.8	15	2.3	385	2.4	5464	3.0	337	-14.1	210	0.0	16197	2.8
2030-31	9033	3.4	1087	3.8	15	2.2	394	2.3	5652	3.4	290	-14.0	210	0.0	16681	3.0
2031-32	9323	3.2	1127	3.7	15	2.2	404	2.4	5880	4.0	294	1.2	210	0.0	17253	3.4
2032-33	9609	3.1	1169	3.7	16	2.1	413	2.4	6109	3.9	297	1.2	210	0.0	17824	3.3
2033-34	9893	3.0	1212	3.7	16	2.2	424	2.4	6338	3.8	301	1.2	210	0.0	18394	3.2
2034-35	10174	2.8	1257	3.7	16	2.1	434	2.4	6493	2.4	304	1.2	210	0.0	18889	2.7
Ave. Growth (2025-2035)	3.0%		3.8%		0.8%		1.2%		2.8%		-8.4%		0.2%		2.5%	

Table 1- 5: Category Wise Demand – MW without incorporating Load Shedding effect - Low Forecast

Year	Domestic		Commercial		Public Light		Small Industries		M&L Industries		Tube Well		Bulk		Total	
	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R
2024-25	1601		188		7		69		857		165		99		2763	
2025-26	1647	2.9	196	4.3	7	-6.6	68	-2.0	935	9.1	141	-14.5	100	1.0	2871	3.9
2026-27	1695	2.9	204	4.0	7	-2.9	67	-1.6	957	2.2	120	-14.4	100	0.0	2925	1.9
2027-28	1741	2.7	212	3.9	7	2.2	67	0.5	975	2.0	103	-14.3	100	0.0	2979	1.9
2028-29	1788	2.6	220	3.9	7	2.3	68	1.4	1004	2.9	89	-14.2	101	1.0	3045	2.2
2029-30	1852	3.6	229	3.9	7	2.3	70	2.4	1048	4.4	76	-14.1	101	0.0	3146	3.3
2030-31	1917	3.5	238	3.8	7	2.3	71	2.4	1095	4.5	65	-13.9	101	0.0	3252	3.4
2031-32	1981	3.3	247	3.8	7	2.2	73	2.5	1150	5.0	66	1.3	101	0.0	3375	3.8
2032-33	2043	3.2	256	3.8	8	2.2	75	2.4	1206	4.8	67	1.2	101	0.0	3498	3.6
2033-34	2106	3.0	265	3.7	8	2.2	77	2.5	1261	4.5	68	1.2	101	0.0	3620	3.5
2034-35	2167	2.9	275	3.7	8	2.2	78	2.5	1291	2.4	69	1.2	101	0.0	3716	2.7
Ave. Growth (2025-2035)	3.1%		3.9%		0.8%		1.3%		4.2%		-8.4%				3.0%	

Table 1- 6: Category Wise Demand (MW) - Base Forecast

Year	Domestic		Commercial		Public Light		Small Industries		M&L Industries		Tube Well		Bulk		Total	
	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R	(MW)	G.R
2024-25	1633		192		8		70		874		168		101		2819	
2025-26	1679	2.9	200	4.3	7	-6.6	69	-2.0	954	9.1	143	-14.5	102	1.0	2928	3.9
2026-27	1728	2.9	208	3.9	7	-2.9	68	-1.6	975	2.2	123	-14.4	102	0.0	2982	1.8
2027-28	1775	2.7	216	3.9	7	2.2	68	0.4	994	1.9	105	-14.3	102	0.0	3036	1.8
2028-29	1821	2.6	225	3.9	7	2.2	69	1.4	1023	2.9	90	-14.2	102	0.0	3102	2.2
2029-30	1886	3.6	233	3.8	7	2.3	71	2.4	1067	4.3	77	-14.1	102	0.0	3203	3.3
2030-31	1951	3.4	242	3.8	7	2.2	72	2.3	1115	4.5	67	-14.0	102	0.0	3310	3.3
2031-32	2014	3.3	251	3.7	8	2.2	74	2.4	1170	5.0	67	1.2	102	0.0	3433	3.7
2032-33	2077	3.1	260	3.7	8	2.1	76	2.4	1226	4.8	68	1.2	102	0.0	3556	3.6
2033-34	2139	3.0	270	3.7	8	2.2	78	2.4	1281	4.5	69	1.2	102	0.0	3678	3.4
2034-35	2201	2.9	280	3.7	8	2.2	80	2.4	1311	2.4	70	1.2	103	1.0	3775	2.6
Ave. Growth (2025-2035)	3.0%		3.8%		0.8%		1.2%		4.1%		-8.4%				3.0%	

Table 1- 7: Division-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Faisalabad

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	11133		988	8.15	107	0.87	12228	60.0	2328
2025-26	11282	1.34	940	7.69	187	1.51	12409	58.9	2405
2026-27	11446	1.45	935	7.55	188	1.50	12569	58.4	2457
2027-28	11616	1.49	934	7.45	190	1.49	12740	58.0	2506
2028-29	11832	1.86	937	7.34	192	1.48	12961	57.7	2564
2029-30	12180	2.94	949	7.23	196	1.47	13324	57.3	2654
2030-31	12569	3.20	964	7.12	200	1.46	13733	57.0	2751
2031-32	13029	3.65	983	7.02	206	1.45	14218	56.7	2863
2032-33	13487	3.52	1002	6.92	212	1.44	14701	56.4	2974
2033-34	13951	3.44	1021	6.82	217	1.43	15189	56.2	3086
2034-35	14339	2.78	1039	6.76	221	1.42	15600	56.2	3170
Ave. Growth (2025-2035)	2.56 %						2.47 %		3.14 %

Table 1- 8: Division-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Sargodha

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	3584		308	7.92	34	0.87	3927	46.1	971
2025-26	3760	4.90	296	7.29	62	1.51	4117	46.0	1022
2026-27	3799	1.05	295	7.21	62	1.50	4157	46.2	1028
2027-28	3850	1.33	296	7.14	63	1.49	4208	46.3	1037
2028-29	3917	1.74	297	7.04	63	1.48	4277	46.4	1052
2029-30	4017	2.56	301	6.96	64	1.47	4382	46.5	1075
2030-31	4111	2.34	305	6.90	65	1.46	4481	46.7	1096
2031-32	4224	2.75	310	6.83	67	1.45	4600	46.8	1123
2032-33	4336	2.67	315	6.77	68	1.44	4719	46.9	1150
2033-34	4443	2.46	320	6.71	69	1.43	4832	47.0	1174
2034-35	4550	2.40	324	6.65	70	1.42	4944	47.1	1199
Ave. Growth (2025-2035)	2.41 %						2.33 %		2.13 %

Table 1- 9: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Faisalabad

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	8177		713	8.02	78	0.87	8968	61.0	1677
2025-26	8338	1.97	680	7.54	138	1.51	9156	59.4	1761
2026-27	8502	1.96	678	7.38	140	1.50	9319	58.6	1817
2027-28	8662	1.88	679	7.27	141	1.49	9482	58.0	1868
2028-29	8858	2.26	683	7.16	143	1.48	9684	57.4	1925
2029-30	9155	3.35	694	7.04	147	1.47	9995	56.9	2007
2030-31	9486	3.62	706	6.93	151	1.46	10343	56.4	2095
2031-32	9859	3.93	722	6.82	156	1.45	10736	55.9	2191
2032-33	10231	3.77	737	6.72	160	1.44	11128	55.6	2286
2033-34	10608	3.69	752	6.62	165	1.43	11524	55.2	2382
2034-35	10910	2.85	766	6.56	168	1.42	11844	55.2	2450
Ave. Growth (2025-2035)	2.92%						2.82%		3.86%

Table 1- 10: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Chiniot

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	776		73	8.55	7	0.87	856	53.1	184
2025-26	765	-1.47	68	8.16	13	1.51	845	53.1	182
2026-27	758	-0.92	67	8.08	13	1.50	837	53.0	180
2027-28	755	-0.41	66	7.99	12	1.49	832	53.0	179
2028-29	755	0.02	65	7.91	12	1.48	832	53.0	179
2029-30	763	1.11	65	7.82	12	1.47	840	53.0	181
2030-31	774	1.44	65	7.74	12	1.46	851	53.0	183
2031-32	795	2.70	66	7.65	13	1.45	873	53.0	188
2032-33	816	2.62	67	7.57	13	1.44	895	53.0	193
2033-34	837	2.56	68	7.48	13	1.43	917	52.9	198
2034-35	857	2.49	69	7.40	13	1.42	939	52.9	203
Ave. Growth (2025-2035)	1.00%						0.93%		0.97%

Table 1- 11: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Jhang

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	1160		107	8.43	11	0.87	1278	49.0	298
2025-26	1158	-0.14	101	8.04	19	1.51	1279	49.2	297
2026-27	1160	0.18	100	7.96	19	1.50	1280	49.4	296
2027-28	1166	0.52	100	7.88	19	1.49	1285	49.6	296
2028-29	1175	0.78	99	7.80	19	1.48	1294	49.7	297
2029-30	1196	1.81	100	7.71	19	1.47	1316	49.8	302
2030-31	1220	1.97	101	7.63	20	1.46	1340	49.9	307
2031-32	1255	2.84	102	7.55	20	1.45	1377	49.9	315
2032-33	1289	2.75	104	7.47	20	1.44	1414	50.0	323
2033-34	1324	2.67	106	7.39	21	1.43	1450	50.0	331
2034-35	1358	2.60	107	7.31	21	1.42	1486	50.1	339
Ave. Growth (2025-2035)	1.59%						1.52%		1.30%

Table 1- 12: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - T.T. Singh

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	1020		96	8.56	10	0.87	1126	52.5	245
2025-26	1021	0.11	91	8.17	17	1.51	1129	52.7	244
2026-27	1026	0.44	90	8.09	17	1.50	1133	53.0	244
2027-28	1034	0.77	90	8.00	17	1.49	1141	53.1	245
2028-29	1044	1.02	90	7.92	17	1.48	1151	53.3	247
2029-30	1066	2.05	91	7.83	17	1.47	1174	53.4	251
2030-31	1089	2.20	91	7.75	17	1.46	1198	53.5	255
2031-32	1121	2.88	93	7.66	18	1.45	1231	53.6	262
2032-33	1152	2.78	94	7.58	18	1.44	1264	53.7	269
2033-34	1183	2.71	96	7.49	19	1.43	1297	53.7	276
2034-35	1214	2.63	97	7.41	19	1.42	1330	53.7	283
Ave. Growth (2025-2035)	1.75%						1.68%		1.44%

Table 1- 13: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast -Sargodha

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	1714		158	8.44	16	0.87	1889	46.0	469
2025-26	1761	2.69	152	7.97	29	1.51	1942	46.1	481
2026-27	1790	1.69	153	7.88	30	1.50	1973	46.3	487
2027-28	1827	2.06	154	7.77	30	1.49	2011	46.4	495
2028-29	1877	2.70	155	7.63	30	1.48	2062	46.4	507
2029-30	1943	3.52	158	7.50	31	1.47	2132	46.5	523
2030-31	1999	2.90	160	7.42	32	1.46	2191	46.6	537
2031-32	2064	3.23	163	7.33	33	1.45	2260	46.6	553
2032-33	2128	3.13	166	7.24	33	1.44	2328	46.7	569
2033-34	2187	2.75	169	7.16	34	1.43	2389	46.8	583
2034-35	2245	2.68	171	7.09	35	1.42	2451	46.8	598
Ave. Growth (2025-2035)	2.73%						2.64%		2.45%

Table 1- 14: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast- Khushab

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	499		45	8.20	5	0.87	549	45.5	138
2025-26	628	25.86	43	6.37	10	1.51	681	43.7	178
2026-27	633	0.81	43	6.32	10	1.50	686	43.8	179
2027-28	640	0.99	43	6.27	10	1.49	693	44.0	180
2028-29	647	1.12	43	6.22	10	1.48	700	44.1	181
2029-30	659	1.87	43	6.19	10	1.47	713	44.3	184
2030-31	672	1.96	44	6.15	11	1.46	726	44.5	186
2031-32	687	2.21	45	6.12	45	1.45	742	44.7	189
2032-33	701	2.15	45	6.08	11	1.44	758	44.9	192
2033-34	716	2.11	46	6.04	11	1.43	773	45.1	196
2034-35	731	2.06	47	6.00	11	1.42	789	45.3	199
Ave. Growth (2025-2035)	3.89%						3.70%		3.73%

Table 1- 15: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Mianwali

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	972		68	6.56	9	0.87	1050	40.6	295
2025-26	967	-0.59	64	6.24	16	1.51	1047	40.7	294
2026-27	965	-0.19	63	6.17	16	1.50	1044	40.8	292
2027-28	965	0.02	63	6.10	16	1.49	1043	40.9	291
2028-29	968	0.29	62	6.04	15	1.48	1046	41.0	291
2029-30	978	1.06	62	5.99	16	1.47	1056	41.1	293
2030-31	991	1.27	63	5.95	16	1.46	1069	41.2	296
2031-32	1011	2.02	64	5.92	16	1.45	1090	41.3	301
2032-33	1031	1.97	64	5.88	16	1.44	1111	41.4	306
2033-34	1051	1.94	65	5.85	16	1.43	1132	41.5	311
2034-35	1071	1.90	66	5.81	16	1.42	1153	41.6	316
Ave. Growth (2025-2035)	0.97%						0.94%		0.69%

Table 1- 16: District-wise Sale (GWh), Generation (GWh) and Demand (MW) Forecast - Bhakkar

Year	Energy Sale		Distribution Losses		Transmission Losses		Generation	Load Factor	Peak Demand
	(GWh)	G.R.(%)	(GWh)	%	(GWh)	%	(GWh)	%	(MW)
2024-25	398		37	8.56	4	0.87	439	49.6	101
2025-26	404	1.49	36	8.17	7	1.51	447	49.8	102
2026-27	411	1.62	36	8.09	7	1.50	454	49.9	104
2027-28	418	1.75	36	8.00	7	1.49	461	50.0	105
2028-29	425	1.84	37	7.92	7	1.48	469	50.0	107
2029-30	437	2.78	37	7.83	7	1.47	482	50.1	110
2030-31	450	2.80	38	7.75	7	1.46	495	50.1	113
2031-32	463	2.99	38	7.66	7	1.45	509	50.2	116
2032-33	476	2.89	39	7.58	8	1.44	523	50.2	119
2033-34	490	2.80	40	7.49	8	1.43	537	50.2	122
2034-35	503	2.72	40	7.41	8	1.42	551	50.2	125
Ave. Growth (2025-2035)	2.37%						2.29%		2.17%

Table 1- 17: Monthly Peak Demand Forecast (Base Forecast)

Year	July	August	September	October	November	December	January	February	March	April	May	June
	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)
2024-25	3027	3090	2855	2448	1810	1624	1712	1594	1892	2355	2950	3091
2025-26	3144	3209	2965	2542	1880	1687	1778	1656	1965	2446	3064	3211
2026-27	3197	3263	3015	2585	1912	1715	1808	1684	1998	2487	3115	3265
2027-28	3251	3318	3066	2629	1944	1744	1839	1712	2032	2529	3168	3320
2028-29	3317	3386	3129	2683	1984	1779	1876	1747	2073	2581	3233	3388
2029-30	3420	3492	3226	2766	2046	1835	1935	1801	2138	2661	3333	3493
2030-31	3529	3603	3329	2854	2111	1893	1996	1859	2206	2746	3439	3604
2031-32	3656	3732	3449	2957	2187	1961	2068	1926	2285	2844	3563	3734
2032-33	3783	3861	3568	3059	2262	2029	2140	1992	2364	2943	3686	3863
2033-34	3908	3989	3686	3160	2337	2096	2211	2058	2442	3040	3809	3991
2034-35	4008	4092	3781	3241	2397	2150	2267	2111	2505	3118	3906	4093

Table 1- 18: Monthly Energy Purchased (GWh) Forecast - Base Forecast

Year	July	August	September	October	November	December	January	February	March	April	May	June	Total
	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh	GWh
2024-25	1752	1786	1704	1176	884	853	820	795	755	931	1446	1633	14537
2025-26	1903	2054	1740	1276	960	967	971	816	1026	1349	1714	1751	16527
2026-27	1926	2078	1761	1291	972	978	983	825	1039	1365	1735	1772	16726
2027-28	1952	2106	1785	1308	985	991	996	836	1052	1383	1758	1795	16948
2028-29	1985	2142	1815	1331	1001	1008	1013	851	1070	1407	1788	1826	17238
2029-30	2039	2200	1864	1367	1029	1036	1041	874	1099	1445	1837	1876	17706
2030-31	2098	2263	1918	1406	1058	1065	1071	899	1131	1487	1889	1929	18214
2031-32	2167	2338	1982	1453	1093	1101	1106	929	1168	1536	1952	1993	18818
2032-33	2237	2413	2045	1499	1128	1136	1141	958	1206	1585	2014	2057	19420
2033-34	2306	2488	2108	1546	1163	1171	1177	988	1243	1634	2077	2121	20021
2034-35	2366	2553	2163	1586	1193	1202	1207	1014	1276	1677	2131	2176	20544

Table 1- 19: List of Overloaded Substations during Period 2024-25 to 2034-35- Criterion= 85%

S. No.	Name	Rating KV	Grid #	Total Capacity (MVA)	Total Capacity (MW)	Overloading Criterion (MW)	Overloading Criterion (%)	Year of Overloading	Overloading Status (MW)	Power Factor
1	CHINIOT ROAD	132	28	120	110.40	93.84	85.00	2032-33	93.20	0.92
2	FAAZIL	132	275	39	35.88	30.50	85.00	2033-34	30.40	0.92
3	HEAD FAQIRIAN	132	585	52	46.80	39.78	85.00	2032-33	38.70	0.90
4	NOOR PUR SETHI	132	597	0	0.00	0.00	85.00	2024-25	3.90	0.92
5	HYDER ABAD THAL	66	686	5	4.50	3.83	85.00	2024-25	4.10	0.90
6	INDUSTRIAL-ESTA	132	824	79	72.68	61.78	85.00	2031-32	61.40	0.92
7	220KV LUDEWALA	220	873	13	11.70	9.95	85.00	2029-30	9.80	0.90
8	T.T.SINGH	132	918	92	82.80	70.38	85.00	2033-34	69.50	0.90
9	PAEC-C-11	132	983	0	0.00	0.00	85.00	2024-25	13.20	0.92
10	126 S.B SARGODHA	132	1010	66	60.72	51.61	85.00	2024-25	56.10	0.92
11	PAEC UNIT NO C-	132	1098	0	0.00	0.00	85.00	2024-25	3.50	0.92
12	LUNDIANWALA	132	1101	26	23.40	19.89	85.00	2033-34	19.80	0.90
13	Tariqabad	132	1236	66	60.06	51.05	85.00	2033-34	49.60	0.91
14	No.2 M3IC (FIEDMC)	132	1248	52	48.36	41.11	85.00	2028-29	37.60	0.93
15	No.1 AIIC (FIEDMC)	132	1255	26	24.18	20.55	85.00	2026-27	18.60	0.93
16	PAEC WAN BHACH	132	1288	0	0.00	0.00	85.00	2034-35	0.00	0.92
17	ALLIED	132	1289	40	36.40	30.94	85.00	2031-32	30.40	0.91
18	Gokhuwal Faisalabad	132	1298	26	23.40	19.89	85.00	2024-25	28.50	0.90

Table 1- 20: List of Overloaded Substations during Period 2024-25 to 2034-35 Criterion=100%

S. No.	Name	Rating (KV)	Grid #	Total Capacity (MVA)	Total Capacity (MW)	Overloading Criterion (MW)	Overloading Criterion (%)	Year of Overloading	Overloading Status (MW)	Power Factor
1	NOOR PUR SETHI	132	597	0	0.00	0.00	100.00	2024-25	3.90	0.92
2	HYDER ABAD THAL	66	686	5	4.50	4.50	100.00	2030-31	4.50	0.90
3	PAEC-C-11	132	983	0	0.00	0.00	100.00	2024-25	13.20	0.92
4	126 S.B SARGODH	132	1010	66	60.72	60.72	100.00	2031-32	59.30	0.92
5	PAEC UNIT NO C-	132	1098	0	0.00	0.00	100.00	2024-25	3.50	0.92
6	No.2 M3IC (FIED	132	1248	52	48.36	48.36	100.00	2030-31	45.00	0.93
7	No.1 AIIC (FIED	132	1255	26	24.18	24.18	100.00	2027-28	22.60	0.93
8	Sadaqat Ltd	132	1268	13	12.09	12.09	100.00	2025-26	6.20	0.93
9	Gokhuwal Faisa	132	1298	26	23.40	23.40	100.00	2024-25	28.50	0.90
10	DAUD KHEL CEMEN	132	1874	0	0.00	0.00	100.00	2024-25	30.70	0.93

Table 1- 21: List of Grids with their Codes and MVA Capacities

Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)	Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)
				T1	T2	T3	T4	T5						T1	T2	T3	T4	T5	
1	16	132	BHAMB	26	26	40	26	0	118	2	28	132	CHINIOT ROAD	40	40	40	0	0	120
3	47	132	GOJRA	0	40	40	40	0	120	4	61	132	HAVELI B.SHAH	26	26	0	0	0	52
5	73	132	JARANWALA	40	40	40	0	0	120	6	76	132	JOHARABAD	40	40	13	0	0	93
7	78	132	JHANG-1	40	40	40	0	0	120	8	79	132	JHANG ROAD	40	40	40	40	40	200
9	93	132	KAMALIA	40	40	26	0	0	106	10	108	132	KHEWA	26	26	13	0	0	65
11	115	132	KUD LATHI	26	26	0	0	0	52	12	134	132	MIANWALI	40	40	26	0	0	106
13	143	132	NARWALA ROAD	40	40	40	0	0	120	14	160	132	PIPLAN	0	26	26	0	0	52
15	192	132	SHAHKOT	40	40	40	0	0	120	16	205	132	SAMUNDRI ROAD	40	40	40	26	26	172
17	226	66	ADHI KOT	13	13	0	0	0	26	18	227	132	AHMAD PUR SIAL	0	0	26	13	0	39
19	231	66	ASHIANA MILL	5	0	0	0	0	5	20	242	132	BHABRA	13	13	13	0	0	39
21	243	132	BHALWAL	26	26	40	0	0	92	22	244	132	BHAWANA	26	26	16	0	0	68
23	250	66	CHASHMA	6	13	0	0	0	19	24	255	132	CHUTIANA	0	26	13	0	0	39
25	275	132	FAAZIL	13	26	0	0	0	39	26	298	132	KALA BAGH	0	13	13	0	0	26
27	322	66	MANKERA	13	13	0	0	0	26	28	331	132	MURID WALA	40	26	0	0	0	66
29	333	132	RAKH DAGRAN	0	26	13	0	0	39	30	334	132	NIA LAHORE	0	0	26	26	0	52

Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)
				T1	T2	T3	T4	T5	
31	352	66	MAKAR WAL	19	13	0	0	0	32
33	371	66	SHAMAS	5	0	0	0	0	5
35	395	66	TRUG	26	13	0	0	0	39
37	421	132	MANJALA BAGH	26	26	13	0	0	65
39	423	66	NUSHERA SAKESAR	13	11	0	0	0	24
41	441	132	MEHMOOD KOT	0	26	26	0	0	52
43	458	132	DAUD KHEL	0	13	26	0	0	39
45	475	132	AGRI UNIVERSITY	40	40	40	40	0	160
47	524	132	SAR-LUDEWALA	0	0	0	26	26	52
49	526	132	BARANA	26	40	0	0	0	66
51	585	132	HEAD FAQIRIAN	26	0	26	0	0	52
53	597	132	NOOR PUR SETHI	0	0	0	0	0	0
55	601	132	TALIB WALA	40	40	0	0	0	80
57	641	132	CHINIOT INDUSTRIAL	40	40	40	0	0	120
59	649	132	M.T.M. MILLS	13	0	0	0	0	13
61	674	132	GROAT	26	26	26	0	0	78
32	363	132	SARGODHA CITY	40	40	40	0	0	120
34	373	132	SHOR KOT CITY	26	26	0	0	0	52
36	420	220	220KV JARANWALA ROAD	0	0	0	40	26	66
38	422	66	JAHANIAN SHAH	5	13	0	0	0	18
40	431	132	OLD THERMAL	40	40	40	0	0	120
42	442	132	18-HAZARI	0	0	26	26	0	52
44	459	132	TANDLIAN WALA	26	26	26	0	0	78
46	523	132	S.PUR NOON	16	16	0	0	0	32
48	525	66	BEHAL	13	13	0	0	0	26
50	581	132	WAN BUCHRAN	26	40	0	0	0	66
52	595	132	CHAK JHUMRA	26	26	26	0	0	78
54	598	132	QUAID ABAD	0	26	26	0	0	52
56	618	132	FACTORY AREA	0	40	40	40	0	120
58	648	132	SITARA CHEMICAL	26	26	26	0	0	78
60	673	132	KHURRIANWALA	40	26	40	0	0	106
62	686	66	HYDER ABAD THAL	5	0	0	0	0	5

Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)
				T1	T2	T3	T4	T5	
63	701	132	RAFHAN	13	0	0	0	0	13
65	739	132	J.K. TECH MILLS.	13	0	0	0	0	13
67	759	132	BHAKKAR	0	40	26	40	0	106
69	790	220	220KV SUMMANDRI ROAD	0	0	0	26	13	39
71	824	132	INDUSTRIAL-ESTATE	40	26	13	0	0	79
73	856	132	JHANG-2	40	40	0	0	0	80
75	867	132	SCARP COLONY	26	26	26	0	0	78
77	890	132	REFHAN MAIZE JRW	13	0	0	0	0	13
79	915	132	A.A. SPINNING MILL	26	0	0	0	0	26
81	947	132	SATIANA	26	26	0	0	0	52
83	953	132	THEKRIWALA	26	26	26	0	0	78
85	976	132	LALIAN	26	26	13	0	0	65
87	984	132	SAMUNDRI	26	26	26	0	0	78
89	1010	132	126 S.B SARGODHA	26	40	0	0	0	66
91	1015	132	FLYING CEMENT CO	26	0	0	0	0	26

Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)
				T1	T2	T3	T4	T5	
64	703	132	PIONEER CEMENT	26	36	35	0	0	97
66	744	132	CHASHMA LEFT BANK	0	0	13	0	0	13
68	779	132	PAEC CHASHMA (MIANWA	26	26	0	0	0	52
70	793	220	220KV MARI INDUS	0	0	13	0	0	13
72	853	132	NISHATABAD	40	26	26	0	0	92
74	862	132	BANDALA	40	26	26	26	0	118
76	873	220	220KV LUDEWALA	0	0	0	13	0	13
78	908	132	KIRANA	26	26	26	0	0	78
80	918	132	T.T. SINGH	40	26	26	0	0	92
82	948	132	PIR MAHAL	40	26	40	0	0	106
84	957	132	SHAH PUR	26	26	0	0	0	52
86	983	132	PAEC-C-11	0	0	0	0	0	0
88	995	132	VAC	26	40	0	0	0	66
90	1012	132	SATIANA ROAD	26	26	26	0	0	78
92	1018	132	103/RB CHUDRIWALA	26	26	26	0	0	78

Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)	Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)
				T1	T2	T3	T4	T5						T1	T2	T3	T4	T5	
93	1021	132	KAMAL PUR	26	13	13	0	0	52	94	1065	132	BHERA INDUSTRIAL	13	26	0	0	0	39
95	1070	132	KHADAM STEEL	26	0	0	0	0	26	96	1077	132	MILLAT ROAD	26	26	0	0	0	52
97	1079	132	GAREH FATEH SHAH	13	13	0	0	0	26	98	1098	132	PAEC UNIT NO C-3 C-4	0	0	0	0	0	0
99	1100	132	INTERLOOP	26	0	0	0	0	26	100	1101	132	LUNDIANWALA	13	13	0	0	0	26
101	1107	132	FIEDMC M3 IC	26	26	40	0	0	92	102	1110	132	IBRAHIM FIBER	13	13	0	0	0	26
103	1134	132	CHENAB NAGAR	26	13	0	0	0	39	104	1140	132	MAMUKANJAN	26	13	0	0	0	39
105	1147	132	SPS FAISALABAD	26	26	26	0	0	78	106	1158	132	PAF BASE	26	0	0	0	0	26
107	1168	132	132KV SHAHBAZ K	26	13	0	0	0	39	108	1170	132	AMIN PUR ROAD	13	26	0	0	0	39
109	1177	132	GIS CITY FAISALABAD	0	0	40	40	0	80	110	1179	132	DARYA KHAN	13	26	0	0	0	39
111	1192	132	132KV BHAGTANWALA	26	26	26	0	0	78	112	1199	132	FIRST TREET	13	0	0	0	0	13
113	1211	66	66KV KALOOR KOT	10	0	0	0	0	10	114	1213	66	66KV MUSAKHEL	13	0	0	0	0	13
115	1214	132	CHEENA	13	13	0	0	0	26	116	1230	132	KOT SHAKIR	13	0	0	0	0	13
117	1232	132	PARCO PUMPING STATI	5	0	0	0	0	5	118	1236	132	Tariqabad	26	40	0	0	0	66
119	1243	132	MITHA TIWANA	13	0	0	0	0	13	120	1246	132	ESA KHEL	13	0	0	0	0	13
121	1248	132	No.2 M3IC (FIEDMC)	26	26	0	0	0	52	122	1249	132	66 KV JAURA KALAN	13	0	0	0	0	13
123	1255	132	No.1 AIIC (FIEDMC)	26	0	0	0	0	26	124	1256	132	Gohar Textile	13	0	0	0	0	13

Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)	Sr. No.	Grid No.	KV	Grid Name	Transformer (MVA)					Total (MVA)
				T1	T2	T3	T4	T5						T1	T2	T3	T4	T5	
125	1261	132	FDA City No.1	26	0	0	0	0	26	126	1264	132	CHAK NO. 582/GB	26	0	0	0	0	26
127	1268	132	Sadaqat Ltd	13	0	0	0	0	13	128	1278	132	BEST FIBRES	26	0	0	0	0	26
129	1282	132	Old Thermal Plant	0	0	0	13	13	26	130	1284	132	INTERLOOP Ltd-2	26	0	0	0	0	26
131	1285	132	132-KV BESTWAY CEMEN	40	0	0	0	0	40	132	1288	132	PAEC WAN BHACHRA	0	0	0	0	0	0
133	1289	132	ALLIED	40	0	0	0	0	40	134	1293	132	JHAKKAR	13	0	0	0	0	13
135	1294	132	ZAHID JEE TEXTILE	26	0	0	0	0	26	136	1298	132	Gokhuwal Faisalabad	26	0	0	0	0	26
137	1320	132	Nishat Mills Limited	26	0	0	0	0	26	138	1327	132	KATHA SAGHRAL	13	0	0	0	0	13
139	1328	132	CHHIDRU	13	0	0	0	0	13	140	1874	132	DAUD KHEL CEMENT	0	0	13	0	0	13

Table 1- 22: Maximum Demand (MW) of Substations (Base Forecast)

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
1	16	BHAMB	132	57.9	56.1	44.7	44.1	43.7	43.8	44.1	45.3	46.4	47.6	48.7
2	28	CHINIOT ROAD	132	83.1	81.5	77.5	77.4	77.7	78.8	80.3	82.3	84.3	86.3	88.3
3	47	GOJRA	132	65.5	54.7	55	55.5	56.2	57.4	58.8	60.4	61.9	63.5	65.1
4	61	HAVELI B.SHAH	132	20.4	20	19.7	19.5	19.5	19.6	19.9	20.4	20.9	21.5	22
5	73	JARANWALA	132	52.7	52.6	49.3	49.8	50.3	51.4	52.6	54.1	55.6	57	58.4
6	76	JOHARABAD	132	49.1	49.3	49.8	50.4	51.1	52.3	53.6	55.1	56.6	58.1	59.6
7	78	JHANG-1	132	64.1	49	49.4	50	50.7	51.8	53.1	54.6	56.2	57.7	59.2
8	79	JHANG ROAD	132	110	110.5	50.2	51.3	52.5	54.2	55.8	57.4	59.1	60.7	62.3
9	93	KAMALIA	132	46.5	45.3	44.7	38.9	38.7	39	39.4	40.5	41.5	42.5	43.5
10	108	KHEWA	132	22.8	21.6	20.7	20	19.5	19.2	19.1	19.5	20	20.4	20.9
11	115	KUD LATHI	132	27.8	24.8	24.9	25	25.3	25.7	26.3	27	27.8	28.5	29.2
12	134	MIANWALI	132	35.5	35.4	35.3	35.4	35.5	36	36.5	37.4	38.3	39.2	40.1
13	143	NARWALA ROAD	132	63.8	63.5	18.7	19.1	19.5	20.1	20.7	21.4	22	22.6	23.2
14	160	PIPLAN	132	18.9	19.1	19.5	19.8	20.2	20.8	21.4	22	22.7	23.3	23.9
15	192	SHAHKOT (LESCO)	132	8.2	8	7.8	7.7	7.7	7.7	7.8	8	8.1	8.2	8.4
16	205	SAMUNDRI ROAD	132	97	97.9	81.3	65.4	66.9	68.9	71.1	73.3	75.5	77.7	79.9
17	226	ADHI KOT	66	13	13.1	13.2	13.4	13.6	13.9	14.3	14.7	15	15.4	15.8
18	227	AHMAD PUR SIAL	132	13.4	13.5	13.6	13.8	14	14.3	14.7	15.1	15.5	15.9	16.4
19	231	ASHIANA MILL	66	3	3	3	3	3	3	3	3	3	3	3
20	242	BHABRA	132	10.3	10.3	10.4	10.5	10.7	10.9	11.2	11.5	11.8	12.1	12.4
21	243	BHALWAL	132	51.6	42	42.4	42.9	43.5	44.6	45.8	47	48.3	49.5	50.8
22	244	BHAWANA	132	33	31.9	25.7	25.2	24.8	24.8	24.9	25.6	26.2	26.9	27.6

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
23	250	CHASHMA	66	9.8	10	10.1	10.3	10.5	10.7	11	11.3	11.6	11.9	12.2
24	255	CHUTIANA	132	21.5	21.8	22	22.2	22.5	22.9	23.4	24	24.5	25.1	25.6
25	275	FAZIL	132	24	23.9	23.9	24.1	24.3	24.8	25.3	26	26.6	27.2	27.9
26	298	KALA BAGH	132	11.5	11.5	11.5	11.6	11.7	11.9	12.1	12.4	12.7	13.1	13.4
27	322	MANKERA	132	7.4	4.3	4.3	4.3	4.3	4.4	4.5	4.6	4.8	4.9	5
28	331	MURID WALA	132	31.3	31	30.9	30.9	31.1	31.5	32.1	33	33.9	34.8	35.7
29	333	RAKH DAGRAN	132	12.7	12.9	13.2	13.4	13.7	14.1	14.5	15	15.4	15.9	16.3
30	334	NIA LAHORE	132	20.9	20.8	20.8	20.9	21.1	21.4	21.9	22.5	23.1	23.7	24.3
31	352	MAKAR WAL	66	15.4	14.9	14.6	14.3	14.2	14.2	14.3	14.6	15	15.3	15.6
32	363	SARGODHA	132	64.6	48.2	49.3	50.5	51.6	53.2	54.8	56.4	58	59.6	61.2
33	371	SHAMAS	66	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
34	373	SHOR KOT CITY	132	29.5	29.5	29.7	30.1	30.4	31.1	31.9	32.8	33.7	34.6	35.5
35	395	TRAG	132	10.2	9.9	9.7	9.6	9.5	9.5	9.6	9.8	10.1	10.4	10.6
36	420	220KV JARANWALA	220	39.2	40.1	0	0	0	0	0	0	0	0	0
37	421	MANJALA BAGH	132	20.4	19.7	19.1	18.7	18.4	18.3	18.3	18.8	19.3	19.8	20.3
38	422	JAHANIAN SHAH	66	10.1	10	10	10	10	10.2	10.4	10.7	11	11.2	11.5
39	423	NUSHERA SAKESAR	66	9.5	9.6	9.7	9.9	10.1	10.3	10.6	10.9	11.2	11.5	11.8
40	431	OLD THERMAL	132	50.8	51.4	52.3	53.4	54.4	56	57.6	59.3	61	62.7	64.4
41	441	MEHMOOD KOT	132	17.7	17.9	18.1	18.4	18.7	19.2	19.7	20.3	20.9	21.5	22
42	442	18-HAZARI	132	16	16	16.1	16.2	16.4	16.7	17.1	17.6	18	18.5	19
43	458	DAUD KHEL	132	9.2	9.1	9	9	9.1	9.2	9.3	9.6	9.8	10	10.2
44	459	TANDLIAN WALA	132	45.9	45.4	45.2	33.4	33.5	34	34.6	35.6	36.5	37.4	38.4
45	475	AGRI UNIVERSITY	132	89.1	89.7	57.9	59	60.2	61.9	63.8	65.7	67.6	69.5	71.4

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
46	523	S.PUR NOON	132	13.7	13.7	5.5	5.6	5.6	5.8	5.9	6.1	6.2	6.4	6.6
47	524	SAR-LUDEWALA	132	28.4	19.4	19.7	20	20.3	20.8	21.4	22	22.6	23.2	23.8
48	525	BEHAL	132	9.2	9.2	9.3	9.3	9.5	9.7	9.9	10.2	10.4	10.7	11
49	526	BARANA	132	28.5	28	27.8	27.8	0	28.1	1.9	2	2.1	2.2	2.2
50	581	WAN BUCHRAN	132	20.8	20.1	19.6	19.3	19.1	19.1	19.2	19.7	20.2	20.8	21.3
51	585	HEAD FAQIRIAN	132	31.4	30.6	31	31.4	31.9	32.7	33.5	34.4	35.3	36.2	37.2
52	595	CHAK JHUMRA	132	41.7	39.3	40.2	41.2	42.3	43.7	45.3	47	48.7	50.4	52
53	597	NOOR PUT SETHI	132	3.9	3.9	3.9	3.9	3.9	4	4.1	4.2	4.3	4.4	4.5
54	598	QUAID ABAD	132	19.8	19.5	19.3	19.2	19.2	19.4	19.7	20.2	20.7	21.1	21.6
55	601	TALIB WALA	132	52.5	41.4	42	42.7	43.4	44.5	45.7	47	48.2	49.5	50.7
56	618	FACTORY AREA	132	58.4	59.1	55.9	51.7	52.8	54.3	55.8	57.4	59	60.6	62.2
57	641	CHINIOT	132	50.5	34.7	27.5	27.6	27.8	28.3	28.8	29.7	30.5	31.4	32.3
58	648	SITARA CHEMICAL	132	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
59	649	M.T.M. MILLS	132	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
60	673	KHURRIANWALA	132	65.1	57.3	53.8	54.3	55.2	56.5	58.2	60.2	62.2	64.2	66.2
61	674	GROAT	132	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
62	686	HYDER ABAD THAL	132	4.1	4.1	4.2	4.2	4.3	4.4	4.5	4.6	4.8	4.9	5
63	701	RAFHAN	132	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
64	703	PIONEER CEMENT	132	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
65	739	J.K.TECH MILLS.	132	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
66	744	A.E.C. CHASHMA	132	5.9	5.8	5.7	5.7	5.7	5.7	5.8	5.8	5.9	6	6.1
67	759	BHAKKAR	132	39.8	31.2	31.6	32.1	32.7	33.6	34.5	35.5	36.5	37.4	38.4
68	779	PAEC CHASHMA (M	132	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
69	790	220 KV SUMMANDR	220	21.4	21.7	5.7	5.8	6	6.2	6.4	6.6	6.8	7	7.2
70	793	220KV MARI INDU	220	3	3	3	3.1	3.1	3.2	3.3	3.4	3.5	3.6	3.7
71	824	INDUSTRIAL ESTA	132	48.6	48.9	49.4	50.2	51.3	52.8	54.5	56.5	58.6	60.7	62.8
72	853	NISHATABAD	132	55.3	55.9	49.8	50.8	51.8	53.3	54.8	56.4	57.9	59.5	61.1
73	856	JHANG-2	132	33.8	33.6	33.7	33.9	34.2	34.8	35.6	36.5	37.5	38.5	39.4
74	862	BANDALA	132	56.9	50.6	51.1	51.9	53.2	55	57.2	59.8	62.4	65	67.7
75	867	SCARP COLONY	132	45.7	47	6.7	6.9	7	7.2	7.5	7.7	7.9	8.1	8.4
76	873	220KV LUDEWAL	220	8.6	8.7	8.8	9	9.1	9.3	9.6	9.9	10.1	10.4	10.7
77	890	REFHAN MAIZE JR	132	4.3	4.1	3.9	3.8	3.7	3.7	3.7	3.7	3.8	3.8	3.9
78	908	KIRANA	132	45.1	43.8	44.7	45.6	46.6	47.9	49.3	50.7	52.1	53.5	54.9
79	915	A.A. SPINNING M	132	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
80	918	T.T.SINGH	132	53.2	52.4	53.2	54.2	55.1	56.7	58.3	59.9	61.6	63.2	64.9
81	947	SATIANA	132	28.1	28	25.9	22.8	23	23.5	24.1	24.7	25.4	26	26.6
82	948	PIR MAHAL	132	56.8	55.7	35.2	20.3	20.3	20.5	20.9	21.5	22.1	22.7	23.3
83	953	THEKRIWALA	132	39.6	39.9	40.5	41.2	42.1	43.4	44.8	46.4	48	49.7	51.3
84	957	SHAH PUR	132	25.4	25.4	20	20.1	20.3	20.8	21.2	21.8	22.4	23	23.6
85	976	LALIAN	132	30.6	29.9	29.6	29.4	29.3	29.6	30	30.8	31.6	32.4	33.2
86	983	PAEC-C-11	132	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
87	984	SAMUNDRI	132	41.5	42.2	41	41.9	42.8	44.1	45.4	46.8	48.2	49.6	50.9
88	995	VAC	132	14.7	14.6	14.7	15	15.3	15.8	16.4	17.2	17.9	18.7	19.5
89	1010	126/SB SARGODHA	132	56.1	55	54.5	54.6	55	56	57.4	59.3	61.1	63	64.9
90	1012	SATIANA ROAD	132	36.3	36.7	37.3	26.6	27.1	28	28.8	29.7	30.5	31.4	32.2
91	1015	FLYING CEMENT C	132	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
92	1018	103/RB CHUDRIWA	132	33.6	32.8	32.4	32.3	32.4	32.9	33.6	34.6	35.6	36.6	37.6
93	1021	KAMAL PUR	132	24.6	20	19.7	19.6	19.5	19.7	19.9	20.4	20.9	21.3	21.8
94	1065	BHERA INDUSTRIA	132	13.6	13.8	14.1	14.4	14.8	15.2	15.7	16.1	16.6	17.1	17.6
95	1070	KHADIM STEEL MI	132	9.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
96	1077	MILLAT ROAD	132	29.7	30.8	24.3	25.4	26.5	28	29.5	31.2	32.9	34.7	36.4
97	1079	GARH FATEH SHAH	132	9.4	9	8.8	8.6	8.4	8.4	8.4	8.6	8.9	9.1	9.3
98	1098	PAEC C-3 C-4	132	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
99	1100	INTERLOOP	132	8.2	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
100	1101	LUNDIANWALA	132	16.6	16.2	15.9	15.7	15.5	15.6	15.7	16.2	16.6	17	17.4
101	1107	NO.1 M3 (FIEDMC	132	32.2	35.8	39.6	43.6	48	52.7	58	63.7	69.5	75.4	81.4
102	1110	IBRAHIM FIBRES	132	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
103	1134	CHANAB NAGAR	132	20.1	20.2	20.4	20.6	20.8	21.3	21.8	22.4	23.1	23.7	24.3
104	1140	MAMUNKANJAN	132	15.8	15.4	15.1	14.9	14.9	14.9	15.1	15.5	15.9	16.3	16.7
105	1147	STEAM POWER STA	132	39.5	40	40.7	41.5	42.4	43.6	44.8	46.2	47.5	48.8	50.1
106	1158	PAF BASE MUSHAF	132	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
107	1168	SHEHBAZ KHEL	132	12.7	12.3	12	11.8	11.6	11.6	11.7	12	12.3	12.6	12.9
108	1170	AMINPUR	132	17.7	17.4	17.3	17.3	17.3	17.6	17.9	18.3	18.8	19.3	19.8
109	1177	FAISALABAD CITY	132	38.5	38.8	39.4	40	40.8	41.9	43	44.3	45.5	46.7	48
110	1179	DARYA KHAN	132	14.8	14.9	15.2	15.4	15.7	16.2	16.6	17.1	17.6	18.1	18.6
111	1192	BHAGTAN WALA	132	34.1	32.6	33	33.4	33.9	34.8	35.7	36.7	37.8	38.8	39.8
112	1199	FIRST TREET	132	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
113	1211	KALOOR KOT	66	5.3	5.4	5.4	5.5	5.6	5.8	5.9	6.1	6.3	6.4	6.6
114	1213	MUSA KHEL	66	6.9	6.9	6.9	6.9	6.9	7	7.2	7.4	7.6	7.8	8

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
115	1214	CHEENA	132	10.1	10.2	10.3	10.4	10.6	10.9	11.2	11.5	11.8	12.2	12.5
116	1230	KOT SHAKIR	132	3.6	3.7	3.8	3.9	4	4.1	4.2	4.4	4.5	4.6	4.7
117	1232	PARCO	132	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
118	1236	TARIQ ABAD	132	38.4	38.7	39.2	39.8	40.4	41.5	42.6	43.7	44.9	46.1	47.2
119	1243	66KV MITHA TIWA	66	6	6.2	6.3	6.4	6.6	6.8	7	7.2	7.4	7.6	7.8
120	1246	66KV ESA KHEL	132	5.7	5.8	5.9	6	6.1	6.3	6.4	6.6	6.7	6.9	7
121	1248	NO. 2 M3 (FIEDM	132	17.3	21.6	25.9	30.4	35	39.8	45	50.6	56.3	62	67.9
122	1249	66KV JAURA KALA	66	5.2	5.3	5.4	5.5	5.7	5.8	6	6.2	6.4	6.6	6.8
123	1255	ALLAMA IQBAL NO	132	10.6	14.6	18.6	22.6	26.6	30.6	34.6	38.6	42.6	46.6	46.6
124	1256	GOHAR TEXTILE	132	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
125	1261	FDA CITY NO.1	132	0	0.4	2.6	4.7	6.8	11.1	15.4	15.4	15.4	15.4	15.4
126	1264	CHAK NO. 582/GB	132	9.5	9.3	9.1	9	8.9	9	9	9.3	9.5	9.7	10
127	1268	SADAQAT LTD	132	6.2	6.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
128	1278	BEST FIBRES	132	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
129	1282	66KV OLD THERMA	132	12.7	12.9	13.2	13.5	13.8	14.2	14.6	15	15.5	15.9	16.3
130	1284	INTERLOOP LTD.2	132	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
131	1285	BESTWAY CEMENT	132	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
132	1288	PAEC HARNOLI RO	132	0	0	0	0	0	0	0	0	0	0	0
133	1289	ALLIED	132	23	23.9	24.7	25.5	26.5	27.6	28.7	29.9	31.1	32.4	33.6
134	1293	JHAKKAR	132	7.7	7.5	7.3	7.2	7.2	7.2	7.3	7.5	7.7	7.8	8
135	1294	ZAHIDJEE TEXTIL	132	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
136	1298	GOKHUWAL	132	28.5	29.4	30.4	31.5	32.6	34	35.4	36.9	38.4	39.9	41.4
137	1320	Nishat Mills Li	132	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
138	1327	KATHA SAGHRAL	132	5.6	5.5	5.5	5.5	5.6	5.7	5.8	5.9	6.1	6.2	6.4
139	1328	CHHIDRU	132	1.6	1.5	1.4	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3
140	1874	DAUD KHEL CEMEN	132	30.7	29.1	28	27.2	26.7	26.4	26.4	26.7	27	27.3	27.6
141	1960	CHUND BHERWANA (P)	132	0	0	10.3	10.1	10	10	10.1	10.4	10.7	10.9	11.2
142	1965	USMAN-E-GHANI (P)	132	0	0	44.5	44.7	45.1	45.9	46.9	48.1	49.3	50.5	51.8
143	1985	PINDI BHATTIAN (P)	132	0	22.5	22.4	22.4	22.5	22.8	23.2	23.8	24.5	25.1	25.7
144	1990	KOT MOMIN (P)	132	0	12.6	12.7	12.8	13	13.3	13.6	14	14.3	14.7	15.1
145	1997	SARGODHA-III (P)	132	0	20.7	21	21.2	21.6	22.1	22.7	23.3	23.9	24.5	25.1
146	2202	JARANWALA RD (P)	132	0	0	44.3	45.7	47.1	49	50.9	52.9	55	57	59.1
147	2204	DIJKOT (P)	132	0	0	20.8	21.2	21.6	22.2	22.8	23.4	24.1	24.7	25.3
148	2205	ADHA (P)	132	0	13.6	13.7	13.8	13.9	14.2	14.5	14.9	15.3	15.7	16.1
149	2208	LOWER CANAL RD (P)	132	0	0	9.7	10	10.3	10.7	11.2	11.7	12.3	12.9	13.4
150	2209	AWAGAT (P)	132	0	0	36.4	37.7	39.1	41	43.1	45.4	47.7	50.1	52.4
151	2210	COLLEGE ROAD FS (P)	132	0	0	22.2	22.5	22.9	23.5	24.2	24.9	25.7	26.4	27.2
152	2211	BAKKAR MANDI RD (P)	132	0	0	79.1	79.4	80.1	81.6	83.4	85.4	87.4	89.5	91.6
153	2218	SANDHILIANWALI (P)	132	0	0	20	19.9	19.8	20	20.2	20.8	21.3	21.8	22.3
154	2219	SARAI MOHAJAR (P)	132	0	12	12.2	12.3	12.5	12.8	13.1	13.5	13.9	14.2	14.6
155	2220	BAGH (P)	132	0	13.8	13.9	14	14.1	14.4	14.7	15.1	15.5	15.9	16.3
156	2223	CITY HOUSING SR (P)	132	0	0	0.5	1	10.6	11.2	12.1	13	14	15	16.1
157	2224	SADHAR BY PASS (P)	132	0	0	15.4	15.6	15.8	16.3	16.7	17.1	17.6	18	18.5
158	2225	BUKHARIAN (P)	132	0	0	12.6	12.5	12.4	12.5	12.6	13	13.3	13.6	14
159	2226	SILLANWALI RD-S (P)	132	0	22.8	23.1	23.5	23.9	24.5	25.2	25.9	26.6	27.3	28
160	2252	MALKHANWALA (P)	132	0	0	0	34.2	34.7	35.6	36.6	37.6	38.7	39.8	40.9

S .No	Grid No	Name of Grid Station	KV	Year										
				2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
161	2253	JHOK SEMETLI (P)	132	0	0	0	15.1	15.2	15.4	15.7	16.1	16.5	16.9	17.3
162	2292	WAGHI ADDA (P)	132	0	0	0	20.2	20.1	20.3	20.5	21.1	21.6	22.1	22.6
163	2293	RASOOLPUR (P)	132	0	13.8	13.9	14	14.3	14.7	15.2	15.8	16.4	17.1	17.7
164	2300	NO.3 M3 IC (FIEDMC) (P)	132	0	30	35	40	45	50	55	60	65	70	70
165	2301	BIE PIEDMC (P)	132	0	7	8	10	15	20	21	23	25	25	25
166	2303	KOHAT CEMENT (P)	132	0	0	40	40	40	40	40	40	40	40	40
167	2304	NO. 2 AIIC (FIEDMC) (P)	132	0	5	10	15	20	30	40	50	60	70	70
168	2305	NO. 3 AIIC (FIEDMC) (P)	132	0	5	10	15	20	30	40	50	60	70	70
169	2401	CITY HOUSING SA (P)	132	0	0	1.6	3.3	5.2	7	9.3	11.5	13.1	14.9	16.5
170	2402	FDA CITY NO. 2 (P)	132	0	0	0.4	2.6	4.7	6.8	11.1	15.4	15.4	15.4	15.4
171	2403	AAGHAZ HOUSING (P)	132	0	0	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1	1.1
172	2404	GATTI (P)	132	0	0	18	18.5	19	19.7	20.5	21.3	22.2	23.1	24
173	2405	JHAWARIAN (P)	132	0	0	13.8	13.9	14	14.3	14.6	15	15.4	15.8	16.2

Table 1- 23: Family of Grids (Existing, Proposed & Transit Grid)

S .No	Group No	Grid No	Name of Grid Station	KV	Year										
					2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
1	1	1960	CHUND BHERWANA	132	0	0	0	0	0	0	0	0	0	0	0
2	1	16	BHAMB	132	47.1	45.7	44.7	44.1	43.7	43.8	44.1	45.3	46.4	47.6	48.7
3	1	5006	Bhamb-Chund Bhe	132	10.8	10.5	10.3	10.1	10	10	10.1	10.4	10.7	10.9	11.2
4	2	1965	USMAN-E-GHANI (	132	0	0	0	0	0	0	0	0	0	0	0
5	2	143	NARWALA ROAD	132	18.1	18.4	18.7	19.1	19.5	20.1	20.7	21.4	22	22.6	23.2
6	2	5009	Narwala Road-Us	132	28.8	28.3	28.1	28.1	28.2	28.6	29.1	29.7	30.4	31	31.7
7	3	1965	USMAN-E-GHANI (	132	0	0	0	0	0	0	0	0	0	0	0
8	3	475	AGRI UNIVERSITY	132	56.6	57.1	57.9	59	60.2	61.9	63.8	65.7	67.6	69.5	71.4
9	3	5010	Agri University	132	16.3	16.3	16.4	16.6	16.9	17.3	17.8	18.4	19	19.5	20.1
10	4	1985	PINDI BHATTIAN	132	0	0	0	0	0	0	0	0	0	0	0
11	4	641	CHINIOT	132	27.6	27.4	27.5	27.6	27.8	28.3	28.8	29.7	30.5	31.4	32.3
12	4	5021	Chiniot-Pindi B	132	15.6	15.3	15.2	15.1	15.2	15.4	15.6	16	16.4	16.8	17.2
13	5	1985	PINDI BHATTIAN	132	0	0	0	0	0	0	0	0	0	0	0
14	5	595	CHAK JHUMRA	132	38.5	39.3	40.2	41.2	42.3	43.7	45.3	47	48.7	50.4	52
15	5	5022	Chak Jhumra-Pin	132	3.2	3.2	3.3	3.4	3.5	3.6	3.7	3.9	4	4.2	4.3

16	6	1985	PINDI BHATTIAN	132	0	0	0	0	0	0	0	0	0	0	0
17	6	1021	KAMAL PUR	132	20.5	20	19.7	19.6	19.5	19.7	19.9	20.4	20.9	21.3	21.8
18	6	5023	Kamal Pur-Pindi	132	4.1	4	3.9	3.9	3.8	3.9	3.9	4	4.1	4.2	4.2
19	7	1990	KOT MOMIN (P)	132	0	0	0	0	0	0	0	0	0	0	0
20	7	585	HEAD FAQIRIAN	132	30.4	30.6	31	31.4	31.9	32.7	33.5	34.4	35.3	36.2	37.2
21	7	5028	Head Faqirian-K	132	1	1	1	1	1.1	1.1	1.1	1.2	1.2	1.2	1.3
22	8	1990	KOT MOMIN (P)	132	0	0	0	0	0	0	0	0	0	0	0
23	8	243	BHALWAL	132	41.8	42	42.4	42.9	43.5	44.6	45.8	47	48.3	49.5	50.8
24	8	5030	Bhalwal-Kot Mom	132	9.8	9.8	9.8	9.9	10	10.2	10.5	10.8	11	11.3	11.6
25	9	1990	KOT MOMIN (P)	132	0	0	0	0	0	0	0	0	0	0	0
26	9	1192	BHAGTAN WALA	132	32.3	32.6	33	33.4	33.9	34.8	35.7	36.7	37.8	38.8	39.8
27	9	5031	Bhaghtanwala-Ko	132	1.8	1.8	1.8	1.9	1.9	1.9	2	2	2.1	2.1	2.2
28	10	1997	SARGODHA-III (N	132	0	0	0	0	0	0	0	0	0	0	0
29	10	524	SAR-LUDEWALA	132	19.3	19.4	19.7	20	20.3	20.8	21.4	22	22.6	23.2	23.8
30	10	5040	Sar Ludewala-Sa	132	9.1	9.1	9.2	9.3	9.5	9.7	10	10.2	10.5	10.8	11
31	11	1997	SARGODHA-III (N	132	0	0	0	0	0	0	0	0	0	0	0
32	11	601	TALIB WALA	132	41	41.4	42	42.7	43.4	44.5	45.7	47	48.2	49.5	50.7
33	11	5041	Talibwala-Sargo	132	11.5	11.6	11.7	11.9	12.1	12.4	12.7	13	13.4	13.7	14.1
34	12	2202	JARANWALA RD (P	132	0	0	0	0	0	0	0	0	0	0	0
35	12	420	220KV JARANWALA	220	0	0	0	0	0	0	0	0	0	0	0

36	12	5052	220Jaranwala rd	132	39.2	40.1	41.2	42.5	43.8	45.4	47.2	49	50.8	52.7	54.5
37	13	2202	JARANWALA RD (P	132	0	0	0	0	0	0	0	0	0	0	0
38	13	867	SCARP COLONY	132	6.4	6.5	6.7	6.9	7	7.2	7.5	7.7	7.9	8.1	8.4
39	13	5053	Scarp Col- Jara	132	2.9	3	3.1	3.2	3.4	3.5	3.7	3.9	4.1	4.4	4.6
40	14	2204	DIJKOT (P)	132	0	0	0	0	0	0	0	0	0	0	0
41	14	947	SATIANA	132	22.5	22.4	22.6	22.8	23	23.5	24.1	24.7	25.4	26	26.6
42	14	5055	Satiana-Dijkot	132	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.6	2.6
43	15	2204	DIJKOT (P)	132	0	0	0	0	0	0	0	0	0	0	0
44	15	984	SAMUNDRI	132	39.4	40.1	41	41.9	42.8	44.1	45.4	46.8	48.2	49.6	50.9
45	15	5056	Samundri-Dijkot	132	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.4	2.5	2.6
46	16	2204	DIJKOT (P)	132	0	0	0	0	0	0	0	0	0	0	0
47	16	790	220 KV SUMMANDR	220	5.4	5.6	5.7	5.8	6	6.2	6.4	6.6	6.8	7	7.2
48	16	5058	220KV Samundri	132	16	16.2	16.5	16.8	17.1	17.6	18.1	18.6	19.1	19.7	20.2
49	17	2205	ADHA (P)	132	0	0	0	0	0	0	0	0	0	0	0
50	17	78	JHANG-1	132	48.8	49	49.4	50	50.7	51.8	53.1	54.6	56.2	57.7	59.2
51	17	5049	Jhang City-Adha	132	2.9	2.8	2.9	2.9	2.9	3	3	3.1	3.2	3.3	3.3
52	18	2205	ADHA (P)	132	0	0	0	0	0	0	0	0	0	0	0
53	18	47	GOJRA	132	54.7	54.7	55	55.5	56.2	57.4	58.8	60.4	61.9	63.5	65.1
54	18	5057	Gojra-Adha	132	10.8	10.7	10.8	10.9	11	11.3	11.5	11.8	12.1	12.4	12.7
55	19	2208	LOWER CANAL RD	132	0	0	0	0	0	0	0	0	0	0	0

56	19	673	KHURRIANWALA	132	53.9	53.6	53.8	54.3	55.2	56.5	58.2	60.2	62.2	64.2	66.2
57	19	5061	Khurrianwala-Lo	132	3.7	3.6	3.6	3.7	3.7	3.8	3.9	4.1	4.2	4.4	4.5
58	20	2208	LOWER CANAL RD	132	0	0	0	0	0	0	0	0	0	0	0
59	20	867	SCARP COLONY	132	6.4	6.5	6.7	6.9	7	7.2	7.5	7.7	7.9	8.1	8.4
60	20	5062	Scarp Col-Lower	132	5.7	5.8	6	6.3	6.5	6.9	7.2	7.7	8.1	8.5	8.9
61	21	2209	AWAGAT (P)	132	0	0	0	0	0	0	0	0	0	0	0
62	21	867	SCARP COLONY	132	6.4	6.5	6.7	6.9	7	7.2	7.5	7.7	7.9	8.1	8.4
63	21	5064	Scarp Col-Awaga	132	30.8	31.6	32.7	34	35.4	37.2	39.2	41.4	43.6	45.9	48.2
64	22	2209	AWAGAT (P)	132	0	0	0	0	0	0	0	0	0	0	0
65	22	73	JARANWALA	132	49	49	49.3	49.8	50.3	51.4	52.6	54.1	55.6	57	58.4
66	22	5065	Jaranwala-Awaga	132	3.6	3.6	3.6	3.7	3.7	3.8	3.9	4	4.1	4.2	4.3
67	23	2210	COLLEGE ROAD FS	132	0	0	0	0	0	0	0	0	0	0	0
68	23	618	FACTORY AREA	132	49.3	49.9	50.7	51.7	52.8	54.3	55.8	57.4	59	60.6	62.2
69	23	5066	Factory Area-Co	132	4	4	4.1	4.1	4.2	4.3	4.4	4.5	4.7	4.8	4.9
70	24	2210	COLLEGE ROAD FS	132	0	0	0	0	0	0	0	0	0	0	0
71	24	205	SAMUNDRI ROAD	132	62	62.9	64.1	65.4	66.9	68.9	71.1	73.3	75.5	77.7	79.9
72	24	5067	Samundri Rd-Col	132	18	18	18.2	18.4	18.7	19.2	19.8	20.4	21	21.7	22.3
73	25	2211	BAKKAR MANDI RD	132	0	0	0	0	0	0	0	0	0	0	0
74	25	475	AGRI UNIVERSITY	132	56.6	57.1	57.9	59	60.2	61.9	63.8	65.7	67.6	69.5	71.4
75	25	5068	Agri University	132	16.3	16.2	16.3	16.6	16.8	17.3	17.8	18.3	18.9	19.4	20

76	26	2211	BAKKAR MANDI RD	132	0	0	0	0	0	0	0	0	0	0	0
77	26	143	NARWALA ROAD	132	18.1	18.4	18.7	19.1	19.5	20.1	20.7	21.4	22	22.6	23.2
78	26	5069	Narwala Road-Ba	132	11.1	11	11	11.1	11.2	11.4	11.7	11.9	12.2	12.5	12.8
79	27	2211	BAKKAR MANDI RD	132	0	0	0	0	0	0	0	0	0	0	0
80	27	79	JHANG ROAD	132	48.1	49.1	50.2	51.3	52.5	54.2	55.8	57.4	59.1	60.7	62.3
81	27	5070	Jhang Road-Bakk	132	52.5	51.9	51.7	51.8	52.1	52.9	53.9	55.1	56.3	57.5	58.7
82	28	2218	SANDHILIANWALI	132	0	0	0	0	0	0	0	0	0	0	0
83	28	948	PIR MAHAL	132	20.8	20.5	20.3	20.3	20.3	20.5	20.9	21.5	22.1	22.7	23.3
84	28	5080	Pir Mahl-Sandhi	132	20.7	20.2	20	19.9	19.8	20	20.2	20.8	21.3	21.8	22.3
85	29	2219	SARAI MOHAJAR (	132	0	0	0	0	0	0	0	0	0	0	0
86	29	759	BHAKKAR	132	30.9	31.2	31.6	32.1	32.7	33.6	34.5	35.5	36.5	37.4	38.4
87	29	5081	Bhakkar-Sarai M	132	8.9	8.9	9.1	9.2	9.4	9.6	9.9	10.2	10.5	10.8	11.1
88	30	2219	SARAI MOHAJAR (	132	0	0	0	0	0	0	0	0	0	0	0
89	30	322	MANKERA	66	4.3	4.3	4.3	4.3	4.3	4.4	4.5	4.6	4.8	4.9	5
90	30	5082	Mankera-Sarai M	132	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.3	3.4	3.5	3.5
91	31	2220	BAGH (P)	132	0	0	0	0	0	0	0	0	0	0	0
92	31	918	T.T.SINGH	132	51.8	52.4	53.2	54.2	55.1	56.7	58.3	59.9	61.6	63.2	64.9
93	31	5084	T.T Singh-Bagh	132	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
94	32	2220	BAGH (P)	132	0	0	0	0	0	0	0	0	0	0	0
95	32	78	JHANG-1	132	48.8	49	49.4	50	50.7	51.8	53.1	54.6	56.2	57.7	59.2

96	32	5085	Jhang City-Bagh	132	12.5	12.4	12.4	12.5	12.6	12.8	13.1	13.4	13.8	14.1	14.5
97	33	2224	SADHAR BY PASS	132	0	0	0	0	0	0	0	0	0	0	0
98	33	79	JHANG ROAD	132	48.1	49.1	50.2	51.3	52.5	54.2	55.8	57.4	59.1	60.7	62.3
99	33	5076	Jhang Road-Sadh	132	9.4	9.4	9.5	9.6	9.7	9.9	10.1	10.4	10.6	10.9	11.1
100	34	2224	SADHAR BY PASS	132	0	0	0	0	0	0	0	0	0	0	0
101	34	143	NARWALA ROAD	132	18.1	18.4	18.7	19.1	19.5	20.1	20.7	21.4	22	22.6	23.2
102	34	5083	Narwala-Sadhar	132	5.7	5.8	5.9	6	6.2	6.4	6.6	6.8	7	7.1	7.3
103	35	2225	BUKHARIAN (P)	132	0	0	0	0	0	0	0	0	0	0	0
104	35	641	CHINIOT	132	27.6	27.4	27.5	27.6	27.8	28.3	28.8	29.7	30.5	31.4	32.3
105	35	5086	Chiniot Industr	132	7.4	7.3	7.2	7.2	7.2	7.3	7.4	7.6	7.8	8	8.2
106	36	2225	BUKHARIAN (P)	132	0	0	0	0	0	0	0	0	0	0	0
107	36	244	BHAWANA	132	27.3	26.3	25.7	25.2	24.8	24.8	24.9	25.6	26.2	26.9	27.6
108	36	5087	Bhawana-Bukhari	132	5.7	5.5	5.4	5.3	5.2	5.2	5.2	5.4	5.5	5.7	5.8
109	37	2226	SILLANWALI RD-S	132	0	0	0	0	0	0	0	0	0	0	0
110	37	115	KUD LATHI	132	24.9	24.8	24.9	25	25.3	25.7	26.3	27	27.8	28.5	29.2
111	37	5014	Kud Lathi-Silla	132	2.9	2.9	2.9	2.9	2.9	3	3.1	3.1	3.2	3.3	3.4
112	38	2226	SILLANWALI RD-S	132	0	0	0	0	0	0	0	0	0	0	0
113	38	363	SARGODHA	132	47.2	48.2	49.3	50.5	51.6	53.2	54.8	56.4	58	59.6	61.2
114	38	5015	Sargodha-Sillan	132	17.4	17.6	17.9	18.2	18.6	19.1	19.6	20.1	20.7	21.2	21.7
115	39	2226	SILLANWALI RD-S	132	0	0	0	0	0	0	0	0	0	0	0

116	39	908	KIRANA	132	42.9	43.8	44.7	45.6	46.6	47.9	49.3	50.7	52.1	53.5	54.9
117	39	5016	Kirana-Sillanwa	132	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.7	2.8	2.8
118	40	2252	MALKHANWALA (P)	132	0	0	0	0	0	0	0	0	0	0	0
119	40	1012	SATIANA ROAD	132	25.1	25.5	26	26.6	27.1	28	28.8	29.7	30.5	31.4	32.2
120	40	5107	Satiana Rd-Malk	132	11.3	11.3	11.3	11.5	11.6	11.9	12.2	12.5	12.8	13.1	13.5
121	41	2252	MALKHANWALA (P)	132	0	0	0	0	0	0	0	0	0	0	0
122	41	618	FACTORY AREA	132	49.3	49.9	50.7	51.7	52.8	54.3	55.8	57.4	59	60.6	62.2
123	41	5108	Factory Area-Ma	132	5.1	5.2	5.2	5.3	5.4	5.5	5.6	5.8	5.9	6.1	6.3
124	42	2252	MALKHANWALA (P)	132	0	0	0	0	0	0	0	0	0	0	0
125	42	205	SAMUNDRI ROAD	132	62	62.9	64.1	65.4	66.9	68.9	71.1	73.3	75.5	77.7	79.9
126	42	5109	Samundri Rd-Mal	132	17.1	17.1	17.2	17.4	17.7	18.2	18.7	19.3	19.9	20.5	21.1
127	43	2253	JHOK SEMETLI (P	132	0	0	0	0	0	0	0	0	0	0	0
128	43	947	SATIANA	132	22.5	22.4	22.6	22.8	23	23.5	24.1	24.7	25.4	26	26.6
129	43	5111	Satiana-Jhok Se	132	3.3	3.3	3.3	3.3	3.3	3.4	3.5	3.5	3.6	3.7	3.8
130	44	2253	JHOK SEMETLI (P	132	0	0	0	0	0	0	0	0	0	0	0
131	44	459	TANDLIAN WALA	132	34	33.6	33.4	33.4	33.5	34	34.6	35.6	36.5	37.4	38.4
132	44	5112	Tandlianwala-Jh	132	12	11.8	11.8	11.8	11.8	12	12.2	12.5	12.9	13.2	13.5
133	45	2292	WAGHI ADDA (P)	132	0	0	0	0	0	0	0	0	0	0	0
134	45	93	KAMALIA	132	40.7	39.8	39.2	38.9	38.7	39	39.4	40.5	41.5	42.5	43.5
135	45	5151	Kamalia-Waghi A	132	5.7	5.6	5.5	5.4	5.4	5.4	5.5	5.6	5.8	5.9	6

136	46	2292	WAGHI ADDA (P)	132	0	0	0	0	0	0	0	0	0	0	0
137	46	948	PIR MAHAL	132	20.8	20.5	20.3	20.3	20.3	20.5	20.9	21.5	22.1	22.7	23.3
138	46	5152	Pir Mahl-Waghi	132	15.4	15	14.9	14.8	14.7	14.9	15	15.4	15.8	16.2	16.6
139	47	2293	RASOOLPUR (P)	132	0	0	0	0	0	0	0	0	0	0	0
140	47	673	KHURRIANWALA	132	53.9	53.6	53.8	54.3	55.2	56.5	58.2	60.2	62.2	64.2	66.2
141	47	5134	Khurrianwala-Ra	132	7.5	7.5	7.5	7.6	7.7	7.9	8.1	8.4	8.7	9	9.3
142	48	2293	RASOOLPUR (P)	132	0	0	0	0	0	0	0	0	0	0	0
143	48	862	BANDALA	132	50.6	50.6	51.1	51.9	53.2	55	57.2	59.8	62.4	65	67.7
144	48	5153	Bandala-Rasoolp	132	6.3	6.3	6.4	6.5	6.6	6.8	7.1	7.4	7.8	8.1	8.4
145	49	2404	GATTI (P)	132	0	0	0	0	0	0	0	0	0	0	0
146	49	853	NISHATABAD	132	48.4	49	49.8	50.8	51.8	53.3	54.8	56.4	57.9	59.5	61.1
147	49	5154	Nishat Abad-Gat	132	6.9	6.9	6.9	7	7.1	7.2	7.4	7.6	7.8	8	8.2
148	50	2404	GATTI (P)	132	0	0	0	0	0	0	0	0	0	0	0
149	50	1077	MILLAT ROAD	132	22.5	23.3	24.3	25.4	26.5	28	29.5	31.2	32.9	34.7	36.4
150	50	5155	Millat Road-Gat	132	7.2	7.5	7.8	8.2	8.6	9.1	9.6	10.2	10.8	11.5	12.1
151	51	2404	GATTI (P)	132	0	0	0	0	0	0	0	0	0	0	0
152	51	28	CHINIOT ROAD	132	79.7	78.2	77.5	77.4	77.7	78.8	80.3	82.3	84.3	86.3	88.3
153	51	5156	Chiniot Rd-Gatt	132	3.4	3.3	3.3	3.3	3.3	3.4	3.4	3.5	3.6	3.7	3.8
154	52	2405	JHAWARIAN (P)	132	0	0	0	0	0	0	0	0	0	0	0
155	52	523	S.PUR NOON	132	5.4	5.4	5.5	5.6	5.6	5.8	5.9	6.1	6.2	6.4	6.6

156	52	5157	S.P.Noon-Jhawar	132	8.3	8.2	8.3	8.3	8.4	8.6	8.8	9	9.2	9.5	9.7
157	53	2405	JHAWARIAN (P)	132	0	0	0	0	0	0	0	0	0	0	0
158	53	957	SHAH PUR	132	19.8	19.8	20	20.1	20.3	20.8	21.2	21.8	22.4	23	23.6
159	53	5158	Shahpur-Jhawari	132	5.6	5.5	5.5	5.6	5.6	5.7	5.9	6	6.2	6.3	6.5
	0	0	Total DISCO:	0	2374	2380.3	2402.3	2433.6	2469.9	2531.2	2598.7	2677.4	2756.3	2834.9	2913.3

Table 1- 24: Energy (kWh) and Maximum Demand (kW) of Substations for Year 2024-25 (Base Forecast)

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
1	1018	103/RB CHUDRIWALA	132	kWh	20961	941	0	555	184285	130	0	0	206871	0.93	15.00
				kW	2991	119	0	63	39511	34	0	0	38447		
2	1010	126/SB SARGODHA	132	kWh	45498	2849	0	1266	130393	101	0	12	180119	0.92	28.00
				kW	6925	407	0	144	65039	27	0	11	65298		
3	442	18-HAZARI	132	kWh	73368	4994	0	698	3304	7791	0	0	90155	0.90	9.00
				kW	10469	770	0	80	7544	2594	0	0	19312		
4	790	220 KV SUMMANDRI ROA	132	kWh	28496	1707	15	512	2101	63	0	0	32893	0.90	188.00
				kW	8132	591	8	58	423590	17	0	0	389157		
5	873	220KV LUDEWAL	132	kWh	33056	4230	9	414	3886	518	0	1	42114	0.90	5.00
				kW	6620	966	5	47	4556	138	0	2	11101		
6	793	220KV MARI INDUS	132	kWh	13154	937	0	151	428	612	0	43	15326	0.90	2.00
				kW	3264	238	0	17	815	163	0	54	4097		
7	1246	66KV ESA KHEL	132	kWh	22612	2188	0	138	318	178	0	7092	32525	0.90	3.00
				kW	4450	714	0	16	853	47	0	1562	6879		
8	1249	66KV JAURA KALAN	132	kWh	22675	1302	19	43	300	180	0	8	24527	0.90	3.00
				kW	6471	675	11	5	335	72	0	4	6816		
9	1243	66KV MITHA TIWANA	132	kWh	29646	2300	2	395	433	613	0	0	33388	0.90	4.00
				kW	5640	710	1	45	1799	163	0	0	7523		
10	1282	66KV OLD THERMAL	132	kWh	31102	26768	499	184	15300	0	0	400	74253	0.91	8.00
				kW	7397	6643	285	21	3564	0	0	651	17633		
11	915		132	kWh	0	0	0	0	6477	0	0	0	6477	0.93	2.00

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
		A.A. SPINNING MILL		kW	0	0	0	0	4477	0	0	0	4477		
12	744	A.E.C. CHASHMA LB	132	kWh	4061	243	0	11	99	39	0	2084	6537	0.90	2.00
				kW	2318	92	0	1	1036	10	0	1736	4675		
13	2205	ADHA (P)	132	kWh	59337	6678	45	1838	10268	2434	0	18	80618	0.90	8.00
				kW	7521	905	26	176	8440	526	0	11	16058		
14	226	ADHI KOT	132	kWh	50964	4518	12	297	16639	257	0	12	72699	0.91	7.00
				kW	8951	860	7	34	6848	68	0	647	15673		
15	475	AGRI UNIVERSITY	132	kWh	177476	34042	841	52404	125282	96	0	7109	397249	0.91	28.00
				kW	22264	4572	480	5128	30310	26	0	2575	62086		
16	227	AHMAD PUR SIAL	132	kWh	64224	4760	12	719	4134	3243	0	0	77092	0.90	8.00
				kW	8146	604	7	77	7923	864	0	0	15858		
17	1255	ALLAMA IQBAL NO.1	132	kWh	3	0	0	0	114502	0	0	0	114505	0.93	12.00
				kW	0	0	0	0	30890	0	0	0	30890		
18	1289	ALLIED	132	kWh	57657	23175	650	5308	57459	0	0	6350	150599	0.92	12.00
				kW	7743	2785	371	606	15877	0	0	2951	28816		
19	1170	AMINPUR	132	kWh	61196	2422	0	1333	3191	14705	0	0	82846	0.90	10.00
				kW	13972	691	0	152	5282	3917	0	0	21613		
20	231	ASHIANA MILL	132	kWh	0	0	0	0	16118	0	0	0	16118	0.93	1.00
				kW	0	0	0	0	3300	0	0	0	3300		
21	2209	AWAGAT (P)	132	kWh	75129	5809	187	4931	162025	1313	0	1149	250542	0.92	15.00
				kW	9845	795	106	563	25255	350	0	386	35209		
22	2220	BAGH (P)	132	kWh	54164	7710	86	1665	5920	3541	0	109	73194	0.90	9.00
				kW	6990	993	49	144	11466	809	0	56	19385		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
23	2211	BAKKAR MANDI RD FSD	132	kWh	195621	21237	590	32873	151902	580	0	6196	408999	0.91	47.00
				kW	23235	2637	337	2298	76799	119	0	2227	102269		
24	862	BANDALA	132	kWh	47561	2435	0	896	363825	402	0	0	415119	0.93	25.00
				kW	6033	347	0	102	59025	107	0	0	62333		
25	526	BARANA	132	kWh	101303	9417	27	2157	5293	25241	0	0	143438	0.90	16.00
				kW	16520	1955	16	246	12184	6723	0	0	33879		
26	525	BEHAL	132	kWh	35620	2254	0	781	1716	2479	0	0	42850	0.90	5.00
				kW	7393	468	0	89	3714	660	0	0	11092		
27	1278	BEST FIBRES	132	kWh	0	0	0	0	79323	0	0	0	79323	0.93	4.00
				kW	0	0	0	0	9768	0	0	0	9768		
28	1285	BESTWAY CEMENT	132	kWh	0	0	0	0	27348	0	0	0	27348	0.93	6.00
				kW	0	0	0	0	15840	0	0	0	15840		
29	242	BHABRA	132	kWh	49048	3435	0	1403	7865	3345	0	0	65096	0.90	6.00
				kW	6221	461	0	240	5145	1572	0	0	12276		
30	1192	BHAGTAN WALA	132	kWh	133395	10217	0	2058	19943	7666	0	107	173387	0.90	19.00
				kW	24171	3430	0	235	13722	2042	0	59	39293		
31	759	BHAKKAR	132	kWh	134043	16124	108	1205	8122	3984	0	393	163979	0.90	18.00
				kW	26845	4090	61	138	9864	995	0	116	37899		
32	243	BHALWAL	132	kWh	153049	16977	137	18376	48919	3464	0	10	240933	0.91	22.00
				kW	24266	3876	78	2098	23448	923	0	4	49224		
33	16	BHAMB	132	kWh	101882	7152	1	2073	4918	62197	0	6	178229	0.90	27.00
				kW	19713	1361	0	237	19260	21609	0	11	55971		
34	244	BHAWANA	132	kWh	66500	4901	33	1082	1918	44296	0	0	118730	0.90	17.00

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
				kW	18515	1399	19	123	4200	13614	0	0	34083		
35	1065	BHERA INDUSTRIAL	132	kWh	66732	9611	38	832	1147	462	0	342	79164	0.90	8.00
				kW	13851	2612	21	95	2185	123	0	89	17078		
36	2225	BUKHARIAN (P)	132	kWh	39953	4906	61	1103	6097	14059	0	2	66181	0.90	8.00
				kW	8129	1428	35	126	4838	4127	0	67	16874		
37	595	CHAK JHUMRA	132	kWh	110996	7377	42	3007	25482	2651	0	30	149586	0.91	15.00
				kW	15839	1531	24	343	17665	706	0	53	32545		
38	1264	CHAK NO. 582/GB	132	kWh	14094	748	0	441	247	11629	0	0	27159	0.90	6.00
				kW	4022	285	0	50	3634	4646	0	0	11374		
39	1134	CHANAB NAGAR	132	kWh	71251	11345	13	767	639	9962	0	762	94739	0.90	12.00
				kW	17682	2756	7	88	3706	3184	0	541	25167		
40	250	CHASHMA	132	kWh	37260	3929	12	334	1643	108	0	2404	45690	0.90	6.00
				kW	8861	1180	7	25	2073	19	0	1200	12029		
41	1214	CHEENA	132	kWh	48165	2553	0	358	930	2723	0	0	54729	0.90	6.00
				kW	10374	971	0	41	2008	725	0	0	12708		
42	1328	CHHIDRU	132	kWh	2756	7	0	0	0	4601	0	0	7365	0.90	1.00
				kW	1049	3	0	0	0	1226	0	0	2050		
43	641	CHINIOT	132	kWh	127803	19071	265	4309	28021	23348	0	12	202828	0.90	16.00
				kW	20842	5582	151	492	2187	6219	0	333	32226		
44	28	CHINIOT ROAD	132	kWh	177948	21509	450	6791	346894	110	0	2805	556507	0.92	40.00
				kW	20728	2531	257	291	73836	11	0	1774	94457		
45	1960	CHUND BHERWANA (P)	132	kWh	23504	1650	0	478	1135	14349	0	1	41117	0.90	6.00
				kW	4548	314	0	55	4444	4985	0	2	12913		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
46	255	CHUTIANA	132	kWh	79406	5697	17	1175	1965	4199	0	13788	106248	0.90	12.00
				kW	13529	2168	10	134	7202	1119	0	4221	25544		
47	2210	COLLEGE ROAD FSD (P)	132	kWh	66304	7771	145	5485	28352	94	0	319	108470	0.91	12.00
				kW	8017	964	83	682	18136	28	0	105	26614		
48	1968	DARUL EHSAN (P)	132	kWh	44040	2927	17	1193	10111	1052	0	12	59352	0.91	6.00
				kW	6284	607	10	136	7011	280	0	21	12914		
49	1179	DARYA KHAN	132	kWh	59526	6278	16	2406	4288	1180	0	6	73699	0.90	9.00
				kW	12355	1792	9	275	5328	269	0	0	18025		
50	458	DAUD KHEL	132	kWh	32453	2681	209	254	35297	2814	0	66	73775	0.92	4.00
				kW	4116	408	120	29	5660	643	0	68	9939		
51	2204	DIJKOT (P)	132	kWh	88166	5454	42	1675	10013	457	0	0	105807	0.90	479.00
				kW	22880	1661	24	191	1074676	122	0	0	989598		
52	618	FACTORY AREA	132	kWh	176036	47031	940	15138	35529	91	0	4459	279224	0.90	28.00
				kW	21843	5836	536	1728	29221	24	0	1469	57625		
53	1177	FAISALABAD CITY	132	kWh	100125	51027	424	5252	67511	0	0	397	224735	0.91	20.00
				kW	12700	6132	242	600	26354	0	0	180	43897		
54	275	FAZIL	132	kWh	58374	4260	0	649	90237	1699	0	0	155219	0.92	11.00
				kW	7572	572	0	74	21129	543	0	0	26902		
55	1261	FDA CITY NO.1	132	kWh	9	0	0	0	0	0	0	0	9	0.90	0.00
				kW	3	0	0	0	0	0	0	0	3		
56	1199	FIRST TREET	132	kWh	0	0	0	0	11628	0	0	0	11628	0.93	1.00
				kW	0	0	0	0	2880	0	0	0	2880		
57	1015		132	kWh	0	0	0	0	164683	0	0	0	164683	0.93	26.00

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
		FLYING CEMENT CO		kW	0	0	0	0	65140	0	0	0	65140		
58	1079	GARH FATEH SHAH	132	kWh	26418	1189	0	530	173	16356	0	0	44666	0.90	6.00
				kW	5483	283	0	61	1481	5941	0	0	11923		
59	1256	GOHAR TEXTILE	132	kWh	0	0	0	0	19957	0	0	0	19957	0.93	3.00
				kW	0	0	0	0	7533	0	0	0	7533		
60	47	GOJRA	132	kWh	250208	26123	131	7692	47044	8465	0	4	339667	0.91	28.00
				kW	32093	3682	75	753	29662	1780	0	4	61244		
61	1298	GOKHUWAL	132	kWh	73783	6453	228	4308	5046	0	0	100	89918	0.90	19.00
				kW	26321	2947	130	492	10372	0	0	82	38327		
62	674	GROAT	132	kWh	0	0	0	0	0	0	0	12642	12642	0.92	10.00
				kW	0	0	0	0	0	0	0	22320	22320		
63	61	HAVELI B.SHAH	132	kWh	66366	5208	56	1098	3829	20828	0	0	97385	0.90	12.00
				kW	12219	1025	32	125	8930	5044	0	0	24638		
64	585	HEAD FAQIRIAN	132	kWh	78377	5705	7	2021	4988	1590	0	541	93230	0.90	18.00
				kW	29824	2171	4	277	8658	508	0	267	37538		
65	686	HYDER ABAD THAL	132	kWh	14448	1608	0	115	1650	1383	0	0	19205	0.90	2.00
				kW	3509	525	0	13	1237	368	0	0	5087		
66	1110	IBRAHIM FIBRES	132	kWh	0	0	0	0	18778	0	0	0	18778	0.93	4.00
				kW	0	0	0	0	9580	0	0	0	9580		
67	824	INDUSTRIAL ESTATE	132	kWh	90035	6455	133	4250	242029	3350	0	3993	350247	0.92	25.00
				kW	10819	776	76	485	45101	892	0	3672	58730		
68	1100	INTERLOOP	132	kWh	0	0	0	0	21104	0	0	0	21104	0.93	7.00
				kW	0	0	0	0	17414	0	0	0	17414		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
69	1284	INTERLOOP LTD.2	132	kWh	0	0	0	0	9581	0	0	0	9581	0.93	4.00
				kW	0	0	0	0	10080	0	0	0	10080		
70	739	J.K.TECH MILLS.	132	kWh	0	0	0	0	31283	0	0	0	31283	0.93	5.00
				kW	0	0	0	0	13776	0	0	0	13776		
71	422	JAHANIAN SHAH	132	kWh	28424	1948	0	624	1350	6536	0	0	38882	0.90	6.00
				kW	5899	741	0	71	5431	1741	0	0	12495		
72	73	JARANWALA	132	kWh	250907	20897	263	5592	20025	15777	0	19	313480	0.90	28.00
				kW	30150	2485	150	638	27077	4202	0	24	58254		
73	2202	JARANWALA RD (P)	132	kWh	166357	22216	1591	6858	88383	75	0	102	285581	0.91	25.00
				kW	20914	2678	908	537	31708	20	0	35	53961		
74	1293	JHAKKAR	132	kWh	24898	1825	0	549	320	9665	0	89	37347	0.90	4.00
				kW	2992	278	0	63	4226	2574	0	0	9120		
75	79	JHANG ROAD	132	kWh	207022	20211	308	25462	162643	256	0	7824	423725	0.91	21.00
				kW	24115	2403	176	1063	18603	35	0	2806	46740		
76	78	JHANG-1	132	kWh	222369	32947	397	7120	23890	16132	0	351	303206	0.90	26.00
				kW	26721	3918	226	610	21190	3683	0	206	53726		
77	856	JHANG-2	132	kWh	128338	9273	113	7410	42441	13241	0	5	200821	0.90	18.00
				kW	15422	1151	65	846	19980	3527	0	29	36917		
78	2253	JHOK SEMETLI (P)	132	kWh	47675	2903	10	1027	9546	8676	0	4	69842	0.90	9.00
				kW	10041	848	6	117	6726	2311	0	4	18049		
79	76	JOHARABAD	132	kWh	238263	26199	99	3107	47293	10188	0	766	325916	0.91	27.00
				kW	30908	4154	57	304	26483	2326	0	407	58174		
80	298	KALA BAGH	132	kWh	48065	3147	24	127	1448	7325	0	211	60347	0.90	7.00

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
				kW	9145	835	14	14	2066	2661	0	816	13996		
81	1211	KALOOR KOT	132	kWh	23867	2550	40	125	498	924	0	3	28007	0.90	3.00
				kW	5676	882	23	14	719	246	0	0	6804		
82	1021	KAMAL PUR	132	kWh	52907	1513	0	536	80228	11046	0	0	146229	0.92	9.00
				kW	6711	192	0	61	14413	3269	0	0	22181		
83	93	KAMALIA	132	kWh	155259	13962	1	8414	16980	45420	0	171	240207	0.90	27.00
				kW	20140	1944	1	823	24005	13960	0	149	54920		
84	1327	KATHA SAGHRAL	132	kWh	8982	386	0	40	732	1290	0	0	11430	0.90	3.00
				kW	6031	245	0	5	1192	344	0	0	7035		
85	1070	KHADIM STEEL MILLS	132	kWh	0	0	0	0	51399	0	0	0	51399	0.93	12.00
				kW	0	0	0	0	31220	0	0	0	31220		
86	108	KHEWA	132	kWh	54904	4064	0	1521	1820	41341	0	0	103650	0.90	13.00
				kW	6461	488	0	116	8147	14363	0	0	26619		
87	673	KHURRIANWALA	132	kWh	93316	12411	423	1228	278800	720	0	449	387347	0.92	25.00
				kW	11333	1540	242	140	48661	192	0	162	59155		
88	908	KIRANA	132	kWh	162580	38562	223	784	13470	42	0	6007	221668	0.90	27.00
				kW	37119	9570	127	90	8626	11	0	3562	56150		
89	1990	KOT MOMIN (P)	132	kWh	42331	4344	29	4074	11591	1196	0	28	63593	0.91	7.00
				kW	7517	1082	17	467	7417	322	0	14	15152		
90	1230	KOT SHAKIR	132	kWh	16665	1207	0	34	66	112	0	241	18324	0.90	2.00
				kW	4048	363	0	4	178	30	0	109	4258		
91	115	KUD LATHI	132	kWh	106195	8390	9	1799	6714	12394	0	0	135502	0.90	15.00
				kW	17569	1916	5	205	9627	3962	0	0	29955		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
92	976	LALIAN	132	kWh	96922	8077	62	1824	14939	30215	0	0	152038	0.90	17.00
				kW	14369	1213	35	208	15884	8326	0	0	36031		
93	2208	LOWER CANAL RD FSD (	132	kWh	16330	1597	58	870	46703	87	0	229	65873	0.92	7.00
				kW	2112	212	33	99	14422	23	0	77	16129		
94	1101	LUNDIANWALA	132	kWh	26281	667	0	501	781	21521	0	0	49751	0.90	10.00
				kW	9376	254	0	69	3142	9554	0	0	20154		
95	649	M.T.M. MILLS	132	kWh	0	0	0	0	14455	0	0	0	14455	0.93	3.00
				kW	0	0	0	0	8400	0	0	0	8400		
96	352	MAKAR WAL	132	kWh	23246	801	0	88	2162	15012	0	0	41310	0.90	9.00
				kW	14743	457	0	12	1695	4798	0	0	19535		
97	2252	MALKHANWALA (P)	132	kWh	107508	11848	455	6234	42332	191	0	407	168975	0.91	18.00
				kW	13369	1479	260	765	25302	53	0	135	39294		
98	1140	MAMUNKANJAN	132	kWh	46214	4289	19	915	2786	19848	0	0	74071	0.90	9.00
				kW	10551	1399	11	104	3308	5874	0	0	19123		
99	421	MANJALA BAGH	132	kWh	66845	3781	0	1267	3469	34722	0	0	110084	0.90	12.00
				kW	8032	575	0	161	7415	11098	0	0	24554		
100	322	MANKERA	132	kWh	14724	1295	2	58	15565	1975	0	0	33620	0.92	2.00
				kW	2241	227	1	7	2569	631	0	0	5109		
101	441	MEHMOOD KOT	132	kWh	81353	8084	36	924	5221	3024	0	0	98642	0.90	10.00
				kW	10319	1073	20	105	11001	806	0	0	20992		
102	134	MIANWALI	132	kWh	123328	17219	106	904	1280	25641	0	10008	178485	0.90	20.00
				kW	25597	3389	60	103	4856	5122	0	5727	40369		
103	1077	MILLAT ROAD	132	kWh	55138	4738	0	2744	152420	754	0	0	215794	0.92	17.00

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
				kW	8992	901	0	313	32829	201	0	0	41074		
104	331	MURID WALA	132	kWh	134614	9200	0	1433	7103	26330	0	0	178680	0.90	19.00
				kW	24392	1910	0	164	9124	7013	0	0	38342		
105	1213	MUSA KHEL	132	kWh	28282	1698	0	100	1130	5066	0	394	36669	0.90	4.00
				kW	5870	646	0	11	1453	1349	0	130	8514		
106	143	NARWALA ROAD	132	kWh	83338	5022	570	16620	68177	996	0	0	174723	0.91	6.00
				kW	10014	610	326	1498	1152	227	0	0	13135		
107	334	NIA LAHORE	132	kWh	89022	5920	0	1626	7427	14399	0	13	118406	0.90	12.00
				kW	14518	994	0	186	7904	4261	0	82	25151		
108	853	NISHATABAD	132	kWh	225133	27675	701	13646	68693	20	0	895	336763	0.91	29.00
				kW	28556	3510	400	1558	32591	5	0	814	64062		
109	1248	NO. 2 M3 (FIEDMC)	132	kWh	495	456	0	0	155605	0	0	0	156556	0.93	18.00
				kW	87	95	0	0	47228	0	0	0	45040		
110	1107	NO.1 M3 (FIEDMC)	132	kWh	248	1730	67	23	316395	86	0	0	318550	0.93	24.00
				kW	38	247	38	3	63101	23	0	0	60277		
111	597	NOOR PUT SETHI (IESC	132	kWh	7969	706	0	111	5429	6	0	0	14220	0.91	3.00
				kW	3032	269	0	13	3413	2	0	0	6056		
112	423	NUSHERA SAKESAR	132	kWh	46583	3573	0	453	807	2071	0	515	54002	0.90	6.00
				kW	7597	1200	0	52	3162	552	0	174	11462		
113	1320	Nishat Mills Limited	132	kWh	0	0	0	0	3299	0	0	0	3299	0.93	2.00
				kW	0	0	0	0	3816	0	0	0	3816		
114	431	OLD THERMAL	132	kWh	198156	47332	842	4953	26869	28	0	1047	279228	0.90	30.00

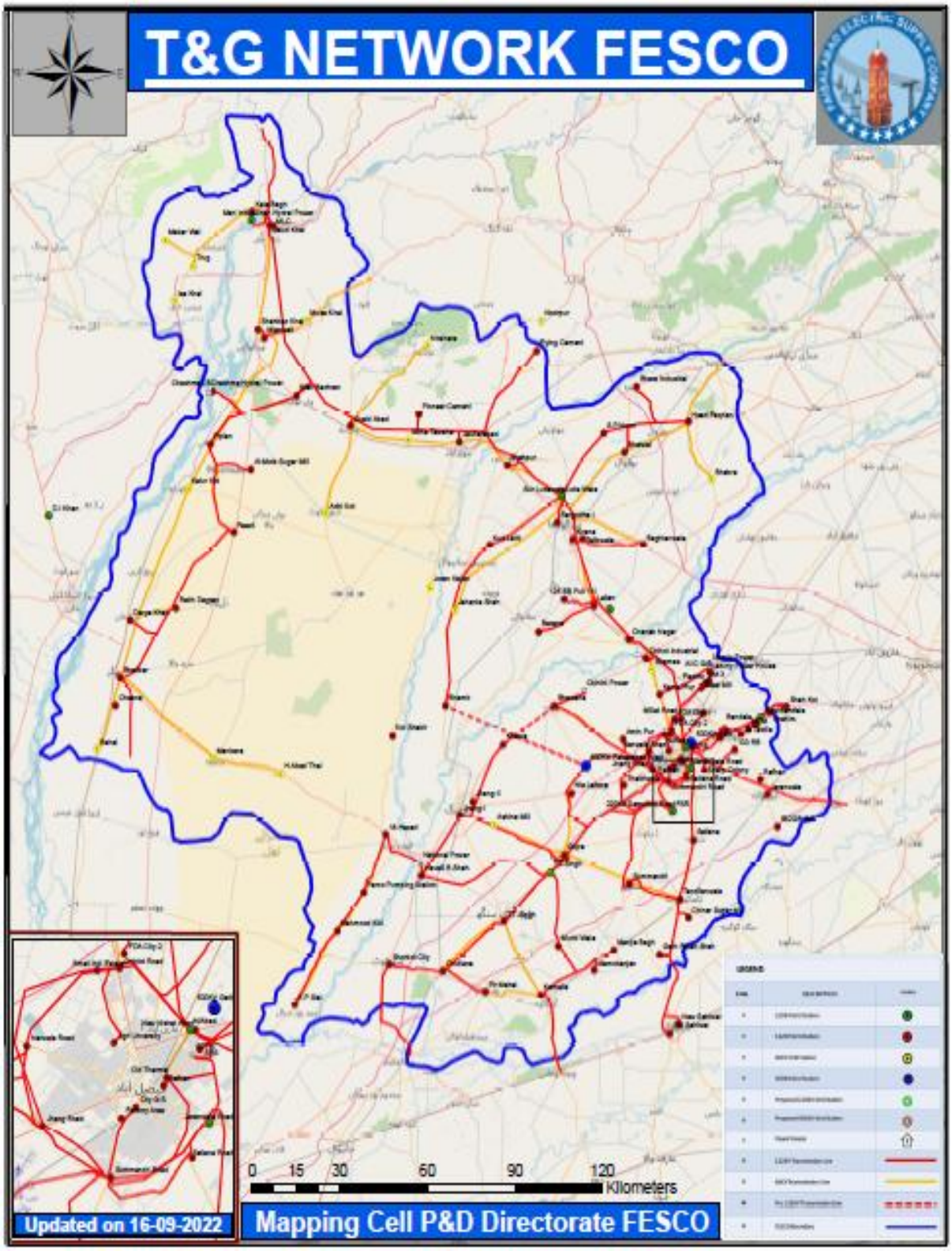
SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
				kW	34274	12280	481	565	17520	8	0	404	62255		
115	1098	PAEC C-3 C-4	132	kWh	0	0	0	0	0	0	0	1088	1088	0.92	1.00
				kW	0	0	0	0	0	0	0	3504	3504		
116	779	PAEC CHASHMA (MIANWA	132	kWh	0	0	0	0	0	0	0	44568	44568	0.92	8.00
				kW	0	0	0	0	0	0	0	19176	19176		
117	1288	PAEC HARNOLI ROAD	132	kWh	0	0	0	0	0	0	0	26	26	0.92	0.00
				kW	0	0	0	0	0	0	0	0	0		
118	983	PAEC-C-11	132	kWh	0	0	0	0	0	0	0	869	869	0.92	6.00
				kW	0	0	0	0	0	0	0	13200	13200		
119	1158	PAF BASE MUSHAF	132	kWh	0	0	0	0	0	0	0	25640	25640	0.92	3.00
				kW	0	0	0	0	0	0	0	6480	6480		
120	1232	PARCO	132	kWh	0	0	0	0	3355	0	0	0	3355	0.93	0.00
				kW	0	0	0	0	1258	0	0	0	1258		
121	1985	PINDI BHATTIAN RD (P	132	kWh	75838	9228	118	2263	28510	12182	0	8	128148	0.90	14.00
				kW	11794	2590	67	258	14413	3301	0	147	29314		
122	703	PIONEER CEMENT	132	kWh	0	0	0	0	9743	0	0	0	9743	0.93	5.00
				kW	0	0	0	0	11736	0	0	0	11736		
123	160	PIPLAN	132	kWh	95973	8356	11	1022	4412	2178	0	0	111952	0.90	11.00
				kW	14608	2120	6	109	8159	544	0	0	22991		
124	948	PIR MAHAL	132	kWh	122162	9863	18	2429	22447	35618	0	0	192538	0.90	19.00
				kW	16602	1407	10	277	15767	9487	0	0	39196		
125	598	QUAID ABAD	132	kWh	67195	5669	0	1075	17360	13463	0	3072	107833	0.90	11.00
				kW	8074	761	0	123	11723	3586	0	782	22545		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
126	701	RAFHAN	132	kWh	0	0	0	0	49008	0	0	0	49008	0.93	3.00
				kW	0	0	0	0	6480	0	0	0	6480		
127	333	RAKH DAGRAN	132	kWh	54711	3796	1	310	1230	1468	0	4	61521	0.90	10.00
				kW	18926	1444	1	35	1529	469	0	4	20168		
128	2293	RASOOLPUR (P)	132	kWh	18946	2036	59	283	84189	151	0	63	105726	0.93	9.00
				kW	2333	258	34	32	22579	40	0	23	24034		
129	890	REFHAN MAIZE JRW	132	kWh	0	0	0	0	1811	0	0	0	1811	0.93	3.00
				kW	0	0	0	0	9121	0	0	0	8664		
130	523	S.PUR NOON	132	kWh	51166	6692	0	866	7893	4938	0	0	71556	0.90	8.00
				kW	8850	1295	0	99	6713	1315	0	0	16444		
131	1268	SADAQAT LTD	132	kWh	0	0	0	0	59036	0	0	0	59036	0.93	9.00
				kW	0	0	0	0	23274	0	0	0	23274		
132	2224	SADHAR BY PASS (P)	132	kWh	55776	4460	224	8874	44675	351	0	1112	115473	0.91	9.00
				kW	6594	534	128	625	12071	77	0	399	19407		
133	984	SAMUNDRI	132	kWh	197947	17260	101	4848	16847	2718	0	0	239721	0.90	23.00
				kW	30536	2627	58	553	18282	724	0	0	47503		
134	205	SAMUNDRI ROAD	132	kWh	264783	21708	383	21701	127266	432	0	0	436272	0.91	31.00
				kW	31817	2694	219	2752	34722	128	0	0	68715		
135	2218	SANDHILIANWALI (P)	132	kWh	62195	5022	9	1237	11428	18133	0	0	98024	0.90	13.00
				kW	8452	717	5	141	16235	4830	0	0	27342		
136	524	SAR-LUDEWALA	132	kWh	80044	7591	43	1145	7522	331	0	293	96970	0.90	11.00
				kW	13243	1469	24	112	10477	75	0	174	23017		
137	2219	SARAI MOHAJAR (P)	132	kWh	48209	5499	33	387	12160	2401	0	114	68802	0.91	7.00
				kW	9209	1331	19	44	4917	687	0	34	14617		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
138	363	SARGODHA	132	kWh	203796	38569	371	3514	13934	1148	0	11750	273082	0.90	24.00
				kW	25849	5061	212	401	16821	306	0	3366	49415		
139	1997	SARGODHA-III (NEW SA	132	kWh	70328	8692	70	894	10474	356	0	1580	92393	0.90	11.00
				kW	12172	2243	40	94	10201	81	0	529	22825		
140	947	SATIANA	132	kWh	78909	3919	0	1784	43726	1957	0	0	130296	0.91	11.00
				kW	10236	526	0	204	14620	521	0	0	23497		
141	1012	SATIANA ROAD	132	kWh	102684	8561	749	1719	37040	251	0	0	151005	0.91	13.00
				kW	13320	1086	428	196	13989	67	0	0	27632		
142	2251	SATIANA ROAD FSD (P)	132	kWh	29978	2308	129	1216	21715	174	0	76	55595	0.92	6.00
				kW	3840	297	73	146	9683	47	0	25	13304		
143	867	SCARP COLONY	132	kWh	25131	1898	73	1976	69845	97	0	499	99520	0.92	6.00
				kW	3375	271	42	226	9665	26	0	167	13083		
144	957	SHAH PUR	132	kWh	106528	7598	10	2013	10710	12679	0	146	139683	0.90	15.00
				kW	18150	2065	6	230	10197	3377	0	131	30741		
145	192	SHAHKOT (LESCO)	132	kWh	8782	170	0	90	36568	105	0	0	45715	0.93	6.00
				kW	3342	65	0	10	12457	28	0	0	15106		
146	371	SHAMAS	132	kWh	3	0	0	0	1053	0	0	0	1055	0.93	1.00
				kW	1	0	0	0	1600	0	0	0	1601		
147	1168	SHEHBAZ KHEL	132	kWh	50991	2446	8	328	1927	19634	0	29	75363	0.90	7.00
				kW	8955	508	5	37	3353	4129	0	59	15341		
148	373	SHOR KOT CITY	132	kWh	120194	11956	141	2549	12778	9883	0	0	157502	0.90	17.00
				kW	14914	1516	80	265	18923	2633	0	0	34497		
149	2226	SILLANWALI RD-SARGOD	132	kWh	86645	15482	133	1386	5984	1771	0	4133	115535	0.90	18.00
				kW	12302	2356	76	158	21653	546	0	1278	36262		

SR No.	Grid Number	Name of Grid Station	kV	Unit	Domestic	Commercial	Public Lighting	Small Industry	M&L Industries	Tubewell		Bulk	Total of Grid Station	Power Factor (%)	Reactive-Power (Mvar)
										Private	Public				
150	648	SITARA CHEMICAL	132	kWh	0	0	0	0	114390	0	0	0	114390	0.93	14.00
				kW	0	0	0	0	35280	0	0	0	35280		
151	1147	STEAM POWER STATION	132	kWh	137099	45376	1624	3983	36657	86	0	347	225172	0.91	22.00
				kW	19563	7617	927	455	23025	23	0	124	49147		
152	918	T.T.SINGH	132	kWh	226876	22229	18	4743	28035	2440	0	1187	285527	0.90	31.00
				kW	44654	5399	10	478	19104	573	0	411	63566		
153	601	TALIB WALA	132	kWh	127526	19658	189	1406	26444	770	0	5414	181408	0.91	21.00
				kW	23108	5906	108	160	20414	176	0	1683	46399		
154	459	TANDLIAN WALA	132	kWh	106014	6785	29	2254	10855	23900	0	11	149847	0.90	19.00
				kW	24698	2213	16	257	10242	6366	0	11	39423		
155	1236	TARIQ ABAD	132	kWh	121722	21643	795	7457	60470	0	0	3872	215958	0.91	20.00
				kW	14626	2745	454	851	26341	0	0	1141	43851		
156	953	THEKRIWALA	132	kWh	125060	18833	0	7065	157043	5120	0	9	313130	0.92	20.00
				kW	15863	2389	0	807	32768	1364	0	7	47877		
157	395	TRAG	132	kWh	34074	3117	0	312	740	14609	0	0	52851	0.90	6.00
				kW	7072	1017	0	43	1581	4669	0	0	12944		
158	1965	USMAN-E-GHANI (P)	132	kWh	105594	11138	646	24537	82312	848	0	1454	226529	0.91	26.00
				kW	12880	1442	369	2294	43266	194	0	527	57924		
159	995	VAC	132	kWh	12388	731	70	203	86776	447	0	0	100615	0.93	7.00
				kW	2020	104	40	23	17245	119	0	0	18574		
160	2292	WAN BUCHRAN	132	kWh	43265	2830	0	341	3327	30011	0	0	79774	0.90	12.00
				kW	14111	1077	0	39	4658	7994	0	0	25091		
161	581	ZAHIDJEE TEXTILE MIL	132	kWh	0	0	0	0	62442	0	0	0	62442	0.93	6.00
				kW	0	0	0	0	14400	0	0	0	14400		

Figure 1- 11: Distribution Network Map (FESCO)





ENERGY AND DEMAND FORECAST

FAISALABAD ELECTRIC SUPPLY COMPANY