GALLUP PAKISTAN
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Electricity in Pakistan

Gallup Pakistan Analysis of the 7th Population Census of Pakistan 2023

PRESS RELEASE

Gallup Pakistan Analysis of the 7th Population Census of Pakistan 2023

According to the 2023 Population Census, approximately 4 million households in Pakistan—7.4% of the total—reported access to solar energy **– Electricity in Pakistan**

Islamabad, February 3rd, 2025

Gallup Pakistan, as part of its Big Data Analysis initiative, is looking at the 7th Population Census of Pakistan 2023, which can be found HERE.

What is the Big Data Analysis Series by Gallup?

Gallup Pakistan's Big Data series was started by Bilal I Gilani, Executive Director of Gallup Pakistan. Bilal explains the rationale of the series: "*The usual complaint from academics and policy makers is that Pakistan does not have data availability. Our experience negates that. Pakistan has lots of data, but it is not available in a usable form and not widely accessible. At Gallup we plan to bridge this gap in terms of accessibility and use of data. The Gallup Big Data series has earlier worked with data sets such as PSLM, Labour Force Survey, and Economic Survey reports as well as National Census Reports and Election Commission Data sets. The current series is using the 7th Population Census of Pakistan 2023 dashboard, which provides a variety of demographic statistics. We hope that these series are useful, and we welcome both feedback as well as possible collaborations as we create a public good in the form of useful data sets in Pakistan.*"

What data points this current edition covers:

This series aims to present the important learnings about access to electricity in Pakistan, for policy makers, the public, as well as for marketers in an easy and understandable way. This edition looks at the 7th Population Census of Pakistan 2023. The series' main aim is to provide data. Implications of these data points for development sector as well as wider socio-political ramifications is something we would like to trigger in relevant circles.

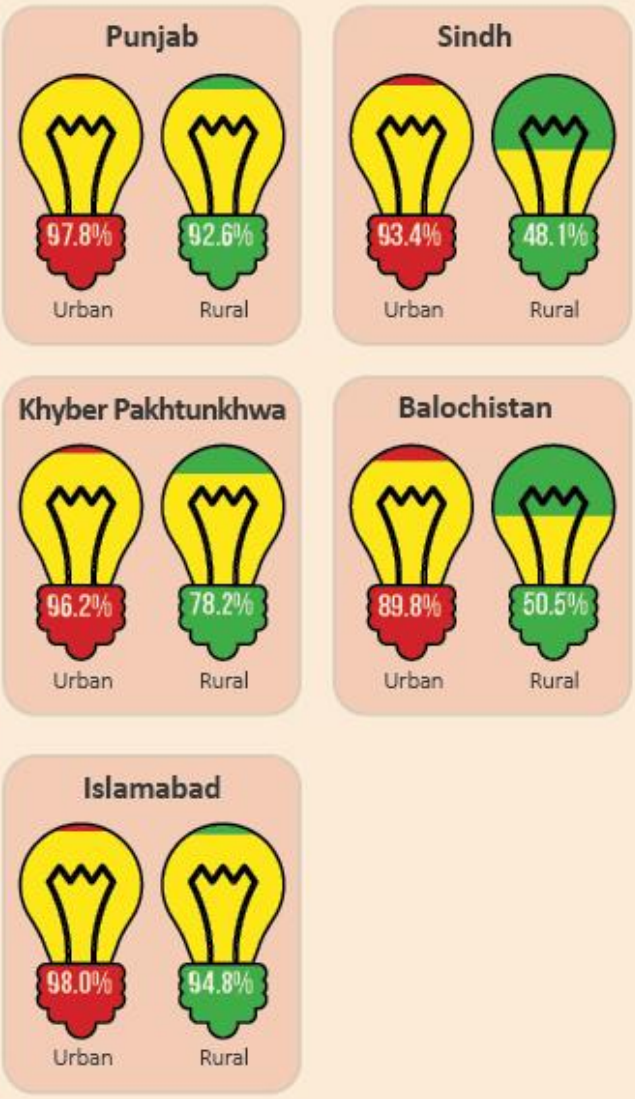
Electricity in Pakistan

Gallup Pakistan Analysis of the 7th Population Census of Pakistan

According to the 2023 Population Census, approximately 4 million households in Pakistan—7.4% of the total reported access to solar energy

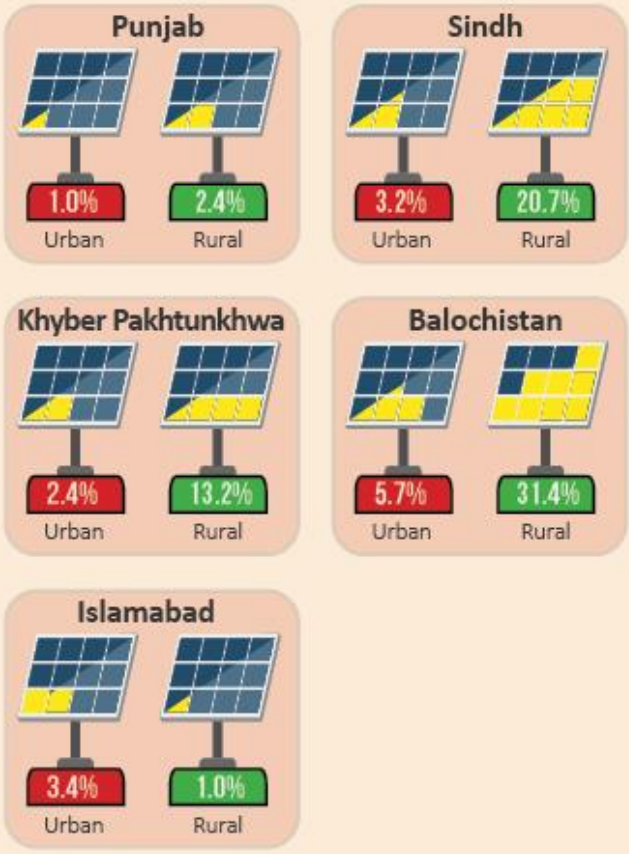
Percentage of total houses reported: Electricity (by province)

According to the 7th Population Census of Pakistan, approximately 41 million households, or 84.7% of total households in the country, report access to electricity.
However, a closer examination of the geographical distribution reveals significant disparities across provinces and between urban and rural areas.



Percentage of total houses reported: Solar (by province)

According to the 2023 Census, approximately 4 million households—7.4% of the total—reported access to solar energy.



Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

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Key Findings:

1. **According to the 7th Population Census of Pakistan, approximately 41 million households, or 84.7% of total households in the country, report access to electricity.**
2. Among districts with the highest reported electricity access, Sindh dominates the list, with Malir (100%), Korangi (99.3%), Karachi Central (99.1%), and Karachi South (99.1%) leading the rankings.
3. In Sindh, 93.4% of urban households have electricity compared to only 48.1% in rural areas, resulting in a striking 45.3% disparity.
4. **According to the 2023 Census, approximately 4 million households in Pakistan—7.4% of the total—reported access to solar energy.**
5. Rural areas in Balochistan, Sindh, and Khyber Pakhtunkhwa report the highest access to solar energy at 31.4%, 20.7%, and 13.2%, respectively.
6. Sibi, which records the highest incidence of solar access at 95.3%, also had the tehsil with the fifth lowest electricity access (0.2%).

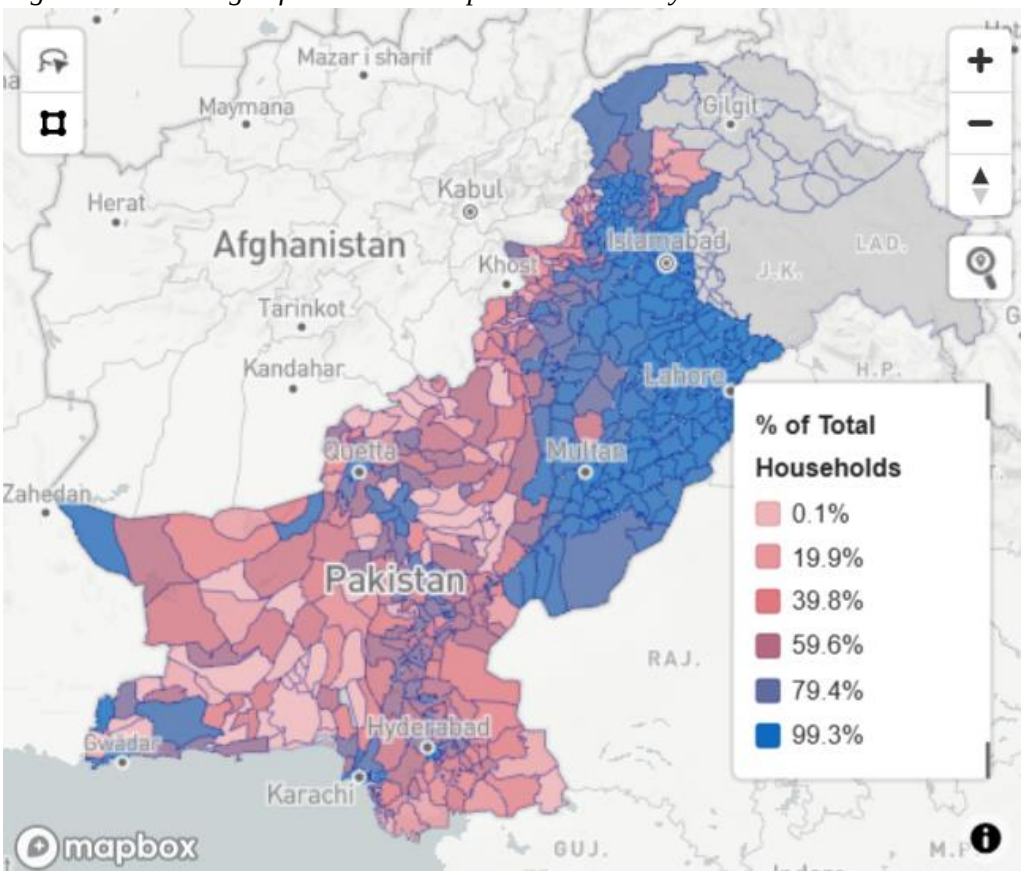
Electricity

According to the 7th Population Census of Pakistan, approximately 41 million households, or 84.7% of total households in the country, report access to electricity.

However, a closer examination of the geographical distribution reveals significant disparities across provinces and between urban and rural areas.

A regional breakdown highlights stark contrasts in electricity access. While most districts in Punjab and northern Khyber Pakhtunkhwa report 75% or higher electricity access, large portions of Sindh and Balochistan, excluding major urban centers, report access rates of 50% or lower. This uneven distribution underscores infrastructural disparities and potential governance challenges in expanding electricity coverage to underprivileged regions.

Figure 1: Percentage of total houses reported: Electricity



Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

A district and tehsil-wise breakdown of the top and lowest quartiles of electricity access further illustrates these disparities. **Among districts with the highest reported percentages, Sindh dominates the list, with Malir (100%), Korangi (99.3%), Karachi Central (99.1%), and Karachi South (99.1%) leading the rankings.** Other highly electrified districts include Toba Tek Singh (99.3%), Gujranwala (99.1%), and Abbottabad (99%). In contrast, districts in Balochistan, such as Khuzdar (0.1%), Lasbela (0.2%), Washuk (0.2%), Sibi (0.2%), and Dera Bugti (0.3%), report the lowest levels of household electricity access. Additionally, Sujawal in Sindh (0.1%) and North Waziristan in Khyber Pakhtunkhwa (0.3%) also rank among the least connected areas. These findings highlight a dual challenge—not

only do disparities exist between provinces, but significant inequalities also persist within the same province, emphasizing the need for targeted policy interventions.

Figure 2: Percentage of total houses reported: Electricity (top 10 districts)

District	Tehsil	Households Reporting	% of Total Households
Malir	Ibrahim Hydri	307,963	100.6%
Toba Tek Singh	Pirmahal	150,102	99.3%
Korangi	Model Colony	75,887	99.3%
Karachi Central	Liaquatabad	96,908	99.1%
Karachi South	Saddar	85,032	99.1%
Korangi	Shah Faisal	92,988	99.1%
Gujranwala	Kamoke	93,376	99.1%
Abbottabad	Abbottabad	286,592	99.0%
Karachi Central	Nazimabad	95,515	99.0%
Karachi South	Lyari	165,416	98.9%

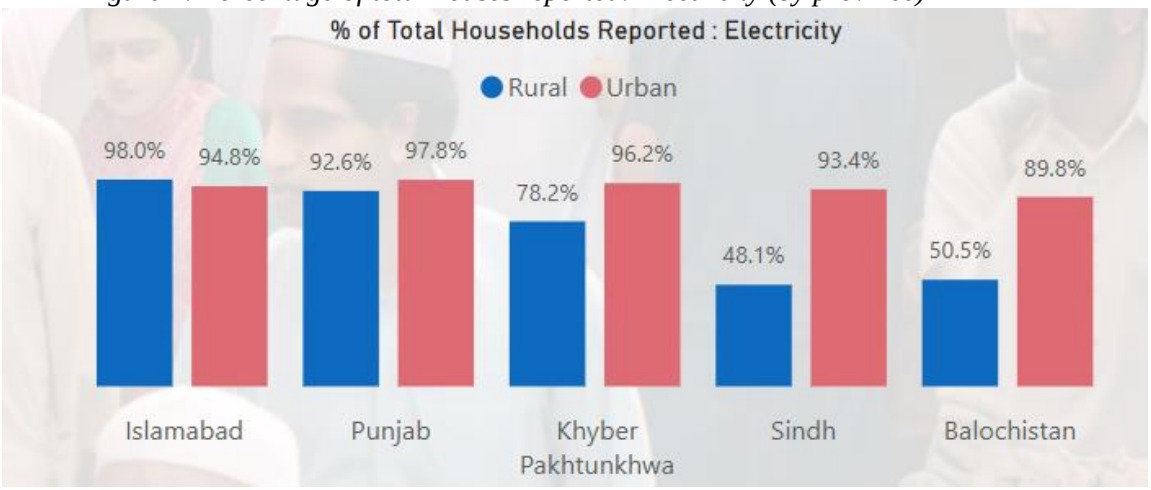
Figure 3: Percentage of total houses reported: Electricity (bottom 10 districts)

District	Tehsil	Households Reporting	% of Total Households
Khuzdar	Saroona	7	0.1%
Sujawal	Kharo Chan	3	0.1%
Lasbela	Liari	4	0.2%
Washuk	Nag	22	0.2%
Sibi	Kot Mandai	3	0.2%
Washuk	Shahoo Garhi	15	0.2%
North Waziristan	Gharyum	5	0.3%
Dera Bugti	Qadirabad	13	0.3%
Panjgur	Gichk	53	0.3%
Khuzdar	Ornach	47	0.4%

Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

When analyzed by region, the expected trend of urban areas having better electricity access than rural areas is reaffirmed. **The gap is particularly pronounced in Sindh, where 93.4% of urban households have electricity compared to only 48.1% in rural areas, resulting in a striking 45.3% disparity.** Balochistan follows a similar pattern, with 89.8% of urban households having electricity access, compared to just 50.5% in rural regions. Khyber Pakhtunkhwa exhibits a smaller but still significant gap, with 96.2% of urban households and 78.2% of rural households connected to electricity. In contrast, Punjab and Islamabad demonstrate relatively uniform access levels, exceeding 90% across both urban and rural areas. The sharp urban-rural divide in certain provinces suggests that infrastructure development efforts have disproportionately benefited urban centers, leaving rural areas underserved.

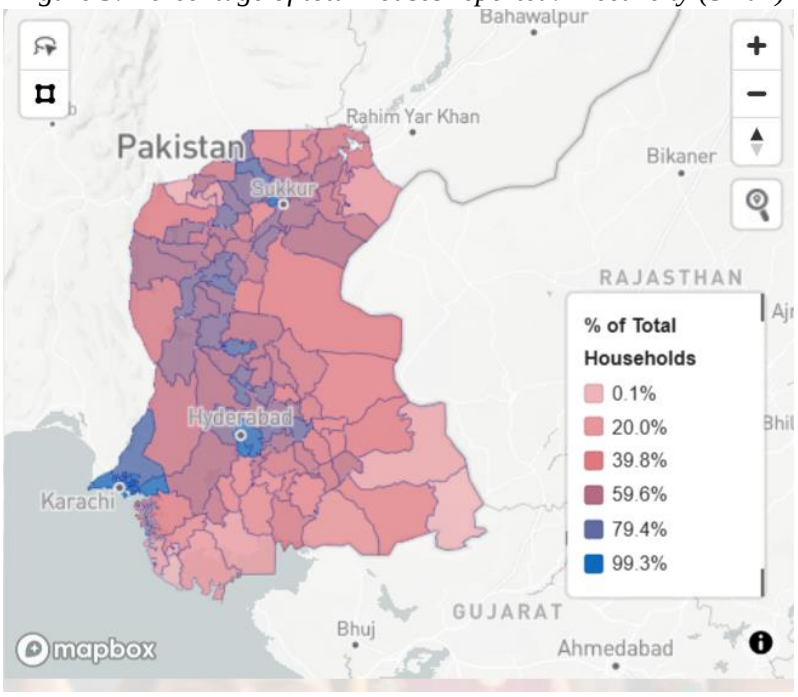
Figure 4: Percentage of total houses reported: Electricity (by province)



Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

Given the pronounced disparity in Sindh, a closer examination of the province reveals that electricity access is concentrated in major metropolitan areas such as Karachi, Hyderabad, and Sukkur. Beyond these urban hubs, most smaller cities and rural areas report access rates between 20% and 60%. This discrepancy underscores the challenges of expanding infrastructure to remote and less economically developed regions.

Figure 5: Percentage of total houses reported: Electricity (Sindh)



Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

A detailed breakdown of the five tehsils in Sindh with the lowest electricity access further highlights the issue. Sujawal (0.1%), Tharparkar (2.3%), and Kambar Shahdad Kot (7.6%) stand out as some of the least connected rural areas in the province. These figures indicate a critical need for targeted electrification programs in these regions to ensure more equitable access to essential services.

Figure 6: Percentage of total houses reported: Electricity (bottom 5 in Sindh)

District	Tehsil	Households Reporting	% of Total Households
Sujawal	Kharo Chan	3	0.1%
Tharparkar	Nagar Parkar	1,302	2.3%
Tharparkar	Dahli	3,445	6.5%
Kambar Shahdad Kot	Qubo Saeed Khan	1,414	7.6%
Thatta	Keti Bunder	1,473	11.3%

Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

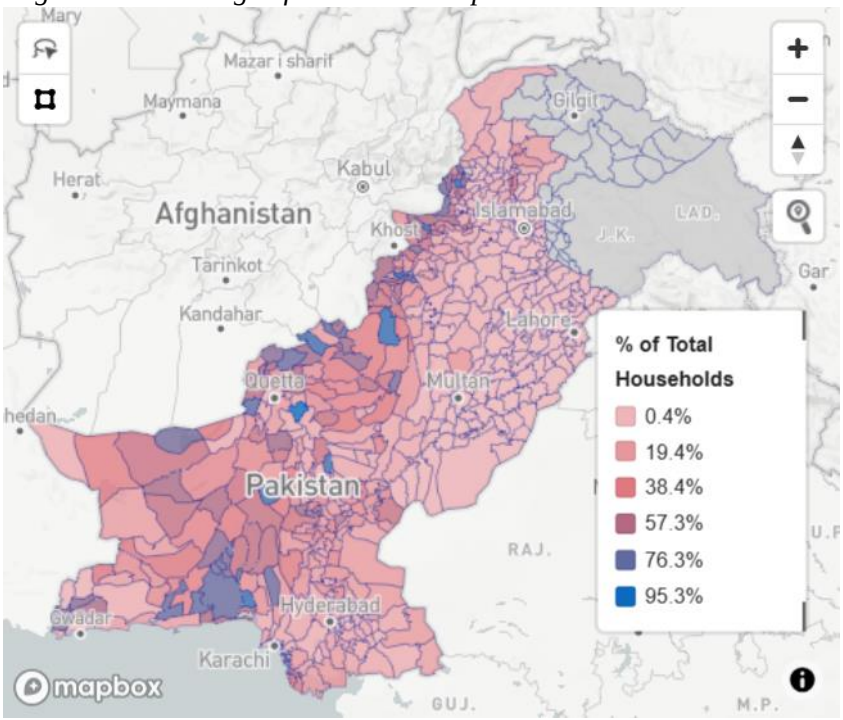
Overall, the findings from the 7th Population Census emphasize the need for strategic infrastructure planning to bridge the electricity access gap between urban and rural areas, particularly in Sindh and Balochistan. Addressing these disparities through targeted investments and policy interventions will be crucial in fostering inclusive development and improving the quality of life for underserved populations.

Solar Energy

While electricity supply has become the norm across most of the country, recent years have witnessed a rise in solar energy adoption for electricity generation, driven by increased awareness and government-backed financial incentives. **According to the 2023 Census, approximately 4 million households—7.4% of the total—reported access to solar energy.**

A geographical analysis reveals no overarching national trend, with solar access generally remaining below 60% across most areas. However, in some districts of western Khyber Pakhtunkhwa and southeastern Sindh, solar adoption exceeds 70%, indicating regional variations that merit further investigation.

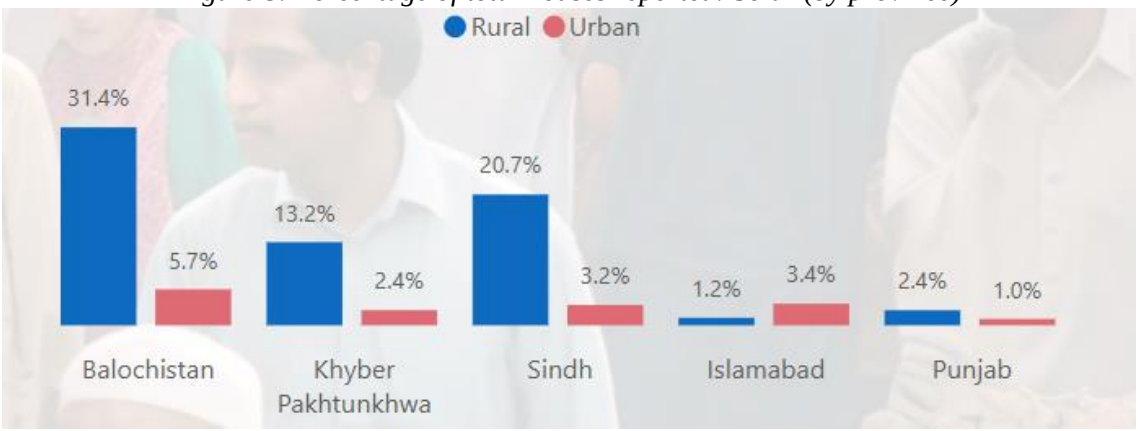
Figure 7: Percentage of total houses reported: Solar



Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

Interestingly, **rural areas in Balochistan, Sindh, and Khyber Pakhtunkhwa report the highest access to solar energy at 31.4%, 20.7%, and 13.2%, respectively**. In contrast, urban households in these provinces show significantly lower adoption rates—5.7% in Balochistan, 3.2% in Sindh, and 2.4% in Khyber Pakhtunkhwa. These figures stand in stark contrast to electricity access data, raising critical questions: Are these differences due to methodological factors, or do remote regions genuinely have higher access to solar energy? If the latter, how can policies be optimized to further facilitate and incentivize solar adoption in these underserved areas?

Figure 8: Percentage of total houses reported: Solar (by province)



Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

A district-wise breakdown of solar energy adoption reveals familiar names. **Sibi, which records the highest incidence of solar access at 95.3%, also had the tehsil with the fifth lowest electricity access (0.2%).** Similarly, North Waziristan, where only 0.3% of households had electricity, reports 90.1% solar penetration. Other notable districts include Mohmand (86%) in Khyber Pakhtunkhwa and Sherani (85.8%) and Duki (85.8%) in Balochistan. These findings suggest that in areas where conventional electricity infrastructure remains weak, solar energy has emerged as a viable alternative, underscoring its potential role in bridging Pakistan's energy access divide.

Figure 9: Percentage of total houses reported: Solar (by district)

District	Tehsil	Households Reporting	% of Total Households
Sibi	Sangan	364	95.3%
North Waziristan	Gharyum	1,792	90.1%
Mohmand	Ambar Utman Khel	8,614	86.0%
Sherani	Sherani	30,990	85.8%
Duki	Talao	18,044	85.8%
Pishin	Nana Sahib	8,296	85.5%
Musakhel	Zimri Plaseen	3,756	85.4%
Lasbela	Lakhra	6,299	85.4%
Orakzai	Upper	15,105	84.7%
Killa Saifullah	Badini	2,285	82.5%

Source: 7th Population Census of Pakistan 2023, visualization by Gallup Pakistan

The findings from the 7th Population Census emphasize the need for strategic infrastructure planning to bridge the electricity access gap between urban and rural areas, particularly in Sindh and Balochistan. Addressing these disparities through targeted investments and policy interventions will be crucial in fostering inclusive development and improving the quality of life for underserved populations. Additionally, the growing reliance on solar energy in regions with poor grid connectivity highlights its potential as a decentralized energy solution. Expanding financial incentives and infrastructure support for solar energy adoption can significantly enhance energy security in Pakistan's most vulnerable districts.

Wish to Contribute to Gallup Big Data Analysis?

Gallup Pakistan is looking for collaboration with researchers to expand the Big Data Analysis project. If you have any ideas, please write to Bilal I Gilani, Project Director, Big Data Analysis at Gallup Pakistan.

Wish to know more about the 7th Population Census of Pakistan 2023?

The Gallup Pakistan 7th Population Census of Pakistan 2023 Dashboard presents an in-depth district and tehsil level analysis of demographic and housing data, covering key factors such as population distribution, age breakdowns, urbanization trends, household structures, literacy and living conditions across various regions.

You can find more information on the 7th Population Census of Pakistan at:

https://www.galluppakistandigitalanalytics.com/

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