

Gallup Pakistan Analysis of Household Integrated Economic Survey (HIES) 2024-25

Energy Access & Clean Fuel Transition



PRESS RELEASE

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Pakistan's Energy Transition Is Underway—but 6 in 10 Households Still Rely on Polluting Fuels

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Energy access is a foundational determinant of health, productivity, and climate resilience. Using evidence from the PSLM / HIES 2024–25 Social Report, this edition examines how Pakistani households are meeting their basic energy needs—focusing on cooking and lighting fuels, the pace of clean energy adoption, and persistent provincial inequalities. While electricity access is now nearly universal and clean fuel use is rising, the data reveal a slower and uneven transition away from solid fuels, particularly in rural and poorer households.

What is the Big Data Analysis Series by Gallup?

Gallup Pakistan's Big Data series was initiated by Bilal I. Gilani, Executive Director of Gallup Pakistan. As he explains: *“Pakistan does not suffer from a lack of data, but from limited accessibility and weak translation of numbers into understanding. Gallup Pakistan bridges this gap by analyzing large, often under-used datasets — from PSLM and Labour Force Surveys to Economic Surveys and National Census data — so these statistics can meaningfully inform policy and public discourse.”*

What data points this current edition covers:

This analysis draws on the PSLM / HIES 2024–25 Social Report, which covers nationally and provincially representative data collected from over 32,000 households across Pakistan. The energy module captures household-level information on fuel used for cooking, fuel used for lighting, and use of clean fuels for cooking, lighting, and heating, with breakdowns by province and region. Comparisons with the 2018–19 HIES round allow assessment of progress over time, particularly in clean energy adoption and diversification of lighting sources.

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Fuel Used for Cooking:

CLEAN COOKING FUELS (38%)

- Gas
- LPG
- Electricity
- Biogas



SOLID FUELS (62%)

- Firewood
- Dung
- Crop Residues

Clean cooking fuel adoption remains limited, with only 38% of households using gas, LPG, electricity, or biogas in 2024–25, while 62% still rely on solid fuels such as firewood, dung, and crop residues—posing persistent health and environmental risks.

Clean Fuel Adoption by Province :



Provincial disparities in clean fuel use are stark, with Punjab (47%) and Sindh (41%) far ahead of Khyber Pakhtunkhwa (29%) and Balochistan (18%), reflecting unequal infrastructure reach and affordability constraints.

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Electricity Access:



Electricity access is nearly universal, reaching 96% of households, yet this has not translated into clean cooking adoption, highlighting a clear gap between basic access and energy quality.

Grid vs Solar:



Grid electricity dominates household lighting, used by 78% of households, while solar energy is emerging as a complementary source, with 18% of households now using solar either exclusively (7%) or in combination with the grid (11%).

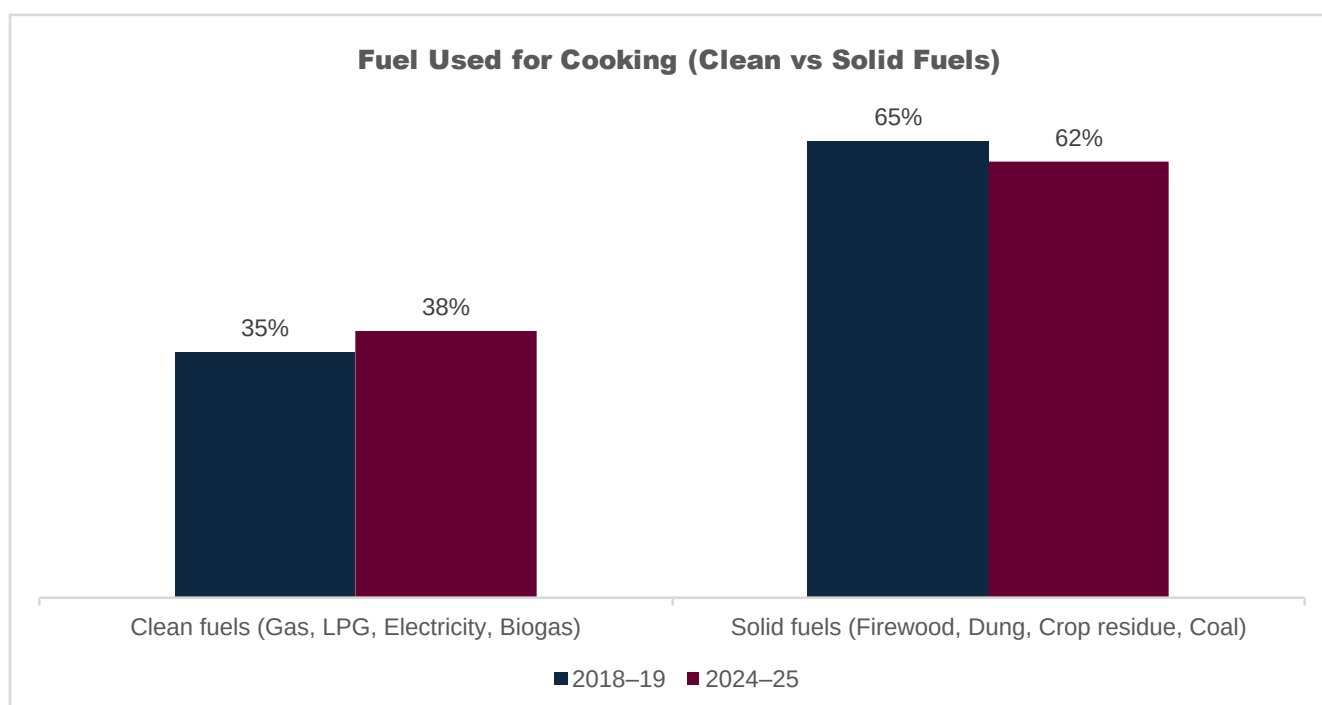
Key Findings:

1. Clean cooking fuel adoption remains limited, with only 38% of households using gas, LPG, electricity, or biogas in 2024–25, while 62% still rely on solid fuels such as firewood, dung, and crop residues—posing persistent health and environmental risks.
2. Progress in clean cooking has been slow, increasing by just 3 percentage points since 2018–19 (from 35% to 38%), indicating that fuel transition is lagging far behind improvements in electricity access.
3. Electricity access is nearly universal, reaching 96% of households, yet this has not translated into clean cooking adoption, highlighting a clear gap between basic access and energy quality.
4. Grid electricity dominates household lighting, used by 78% of households, while solar energy is emerging as a complementary source, with 18% of households now using solar either exclusively (7%) or in combination with the grid (11%).
5. Provincial disparities in clean fuel use are stark, with Punjab (47%) and Sindh (41%) far ahead of Khyber Pakhtunkhwa (29%) and Balochistan (18%), reflecting unequal infrastructure reach and affordability constraints.
6. Solar adoption is rising fastest among households already connected to the grid, suggesting that renewable energy is currently serving as a resilience and cost-management strategy rather than a substitute for conventional power.
7. Pakistan’s energy transition remains uneven and incomplete, with households successfully crossing the threshold of electricity access but still struggling to move away from polluting cooking fuels that disproportionately affect women and children.

1. Fuel Used for Cooking — Clean Energy Remains the Minority Choice

Despite gradual improvement, cooking energy remains Pakistan’s weakest point in the clean energy transition. According to PSLM / HIES 2024–25, only 38% of households use clean fuels (such as gas, LPG, electricity, or biogas) for cooking, up from 35% in 2018–19. This means nearly two-thirds of households still rely on solid fuels, including firewood, crop residue, and animal dung.

This reliance has serious implications. Solid fuels are associated with respiratory disease, eye infections, and adverse pregnancy outcomes, and the burden falls disproportionately on women, who spend more time near cooking areas. The persistence of solid fuel use reflects both affordability constraints and supply gaps—particularly in rural areas where piped gas infrastructure is limited and LPG prices are volatile. The data suggest that while Pakistan has expanded energy *availability*, it has not yet ensured energy *cleanliness* at scale.

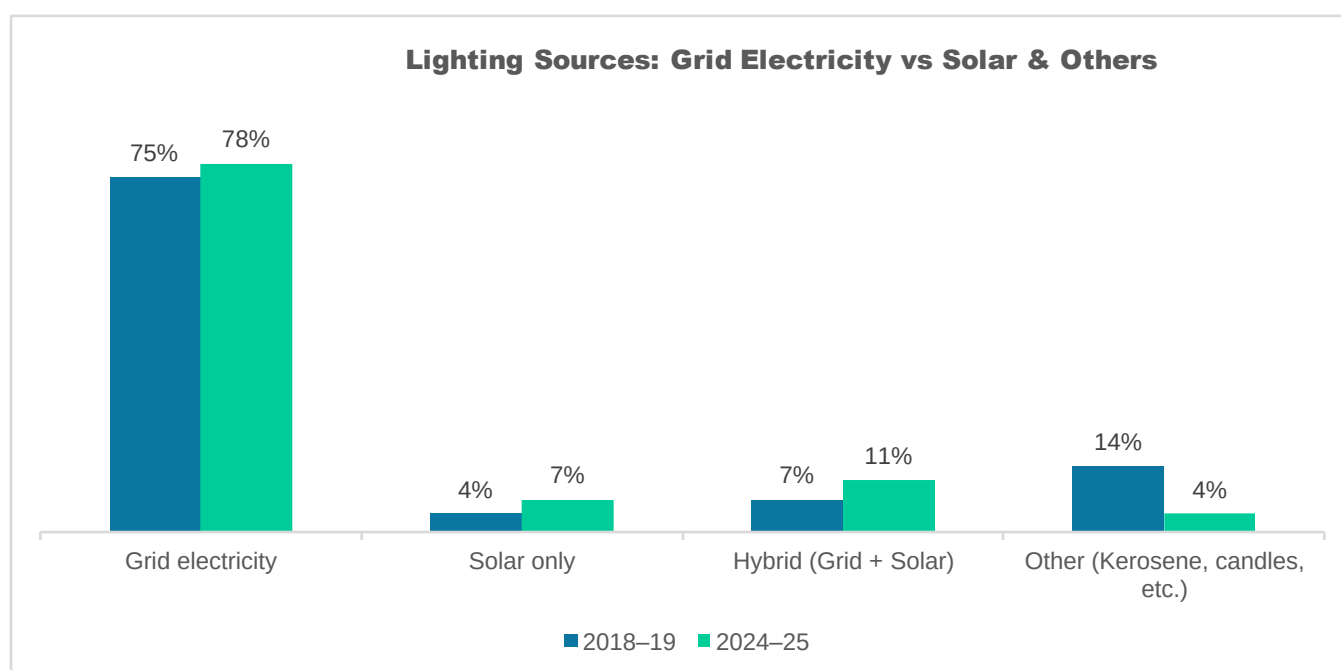


Source: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.

2. Lighting Sources — Electricity Dominates, Solar Slowly Expands

Lighting tells a more positive story. Electricity is used by about 78% of households as their main lighting source, confirming that grid access has become nearly universal. When solar and hybrid solutions are included, overall access to lighting reaches about 96% of households, a marginal but meaningful improvement since the previous survey round.

Notably, the survey shows a shift toward diversified energy sources. Standalone solar use increased from 4% to 7%, while hybrid grid–solar arrangements now account for around 11% of households. This reflects growing household-level adaptation to load shedding, rising electricity tariffs, and climate vulnerability. However, solar adoption remains uneven, with uptake higher in better-off or more infrastructure-constrained regions rather than among the poorest households who could benefit most from off-grid solutions.

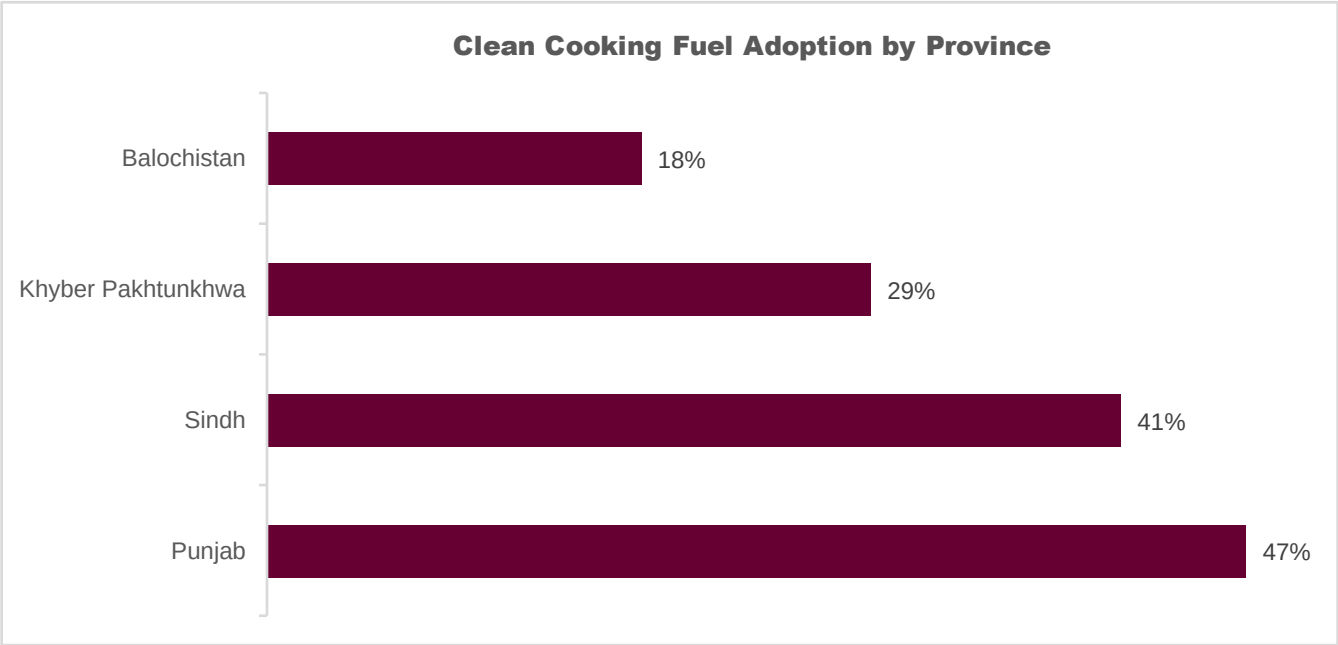


Source: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.

3. Clean Fuel Adoption by Province — Deep Regional Inequalities Persist

Provincial patterns reveal that Pakistan’s clean energy transition is highly uneven. Provinces with stronger gas networks and urban concentration—particularly Punjab—show significantly higher use of clean cooking fuels. In contrast, Balochistan and rural Sindh lag far behind, with most households continuing to depend on solid fuels.

These disparities are not merely geographic; they reflect structural inequalities in infrastructure investment, market access, and household income. Even where electricity access is high, clean cooking remains elusive without affordable fuel alternatives. The provincial gap underscores that energy transition policies must be spatially targeted: expanding LPG distribution, stabilizing prices, and supporting localized clean-energy solutions in underserved regions.

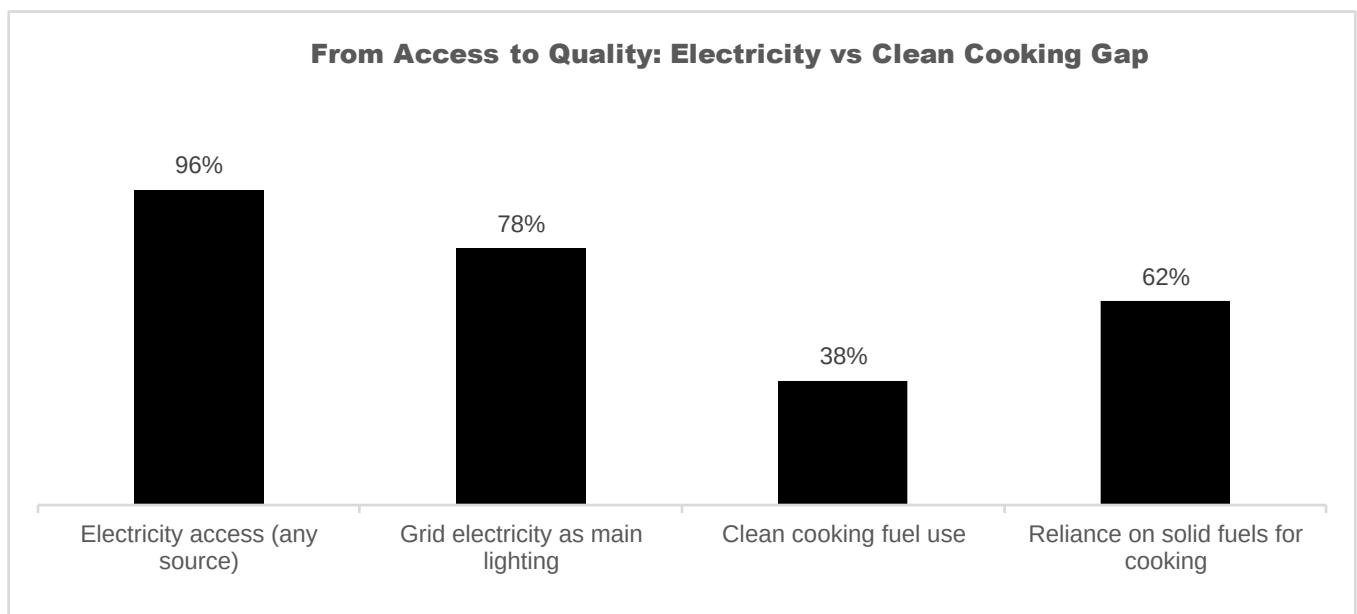


Source: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.

4. From Access to Quality — Pakistan’s Energy Challenge Has Evolved

The PSLM / HIES 2024–25 findings make clear that Pakistan’s energy challenge has shifted. Basic access is no longer the primary constraint—most households can light their homes. The real challenge now lies in energy quality, reliability, and health impact. Clean fuel adoption is rising, but too slowly to meet public health and climate goals.

The continued dominance of solid fuels signals that energy poverty is increasingly multidimensional: households may have electricity but still cook with polluting fuels; they may have grid access but lack reliable supply. Addressing this requires moving beyond infrastructure expansion toward integrated energy policy—linking clean fuel subsidies, rural distribution systems, and climate financing with health and gender outcomes.



Source: Pakistan Social and Living Standards Measurement Survey (PSLM) / Household Integrated Economic Survey (HIES) 2024–25; Pakistan Bureau of Statistics.



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.

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