



Electricity Tariff Reform in Uttar Pradesh, India

Challenges & Key Findings
May 2018

Electricity Subsidy Reform in India



- 80% of India's electricity is generated from coal and therefore need attention
- Because of coal's dominance, subsidies to the electricity sector therefore support fossil fuel based electricity
- Electricity subsidies to transmission and distribution in India increased US\$ 6.7 billion in FY2014 to US\$ 9.9 billion in FY2016
- These subsidies have been for:
 - Financial bailout packages for distribution companies
 - Provided subsidised electricity to poor households and farmers
 - Increasing grid access to rural households

Overview of Challenges with Electricity Tariffs

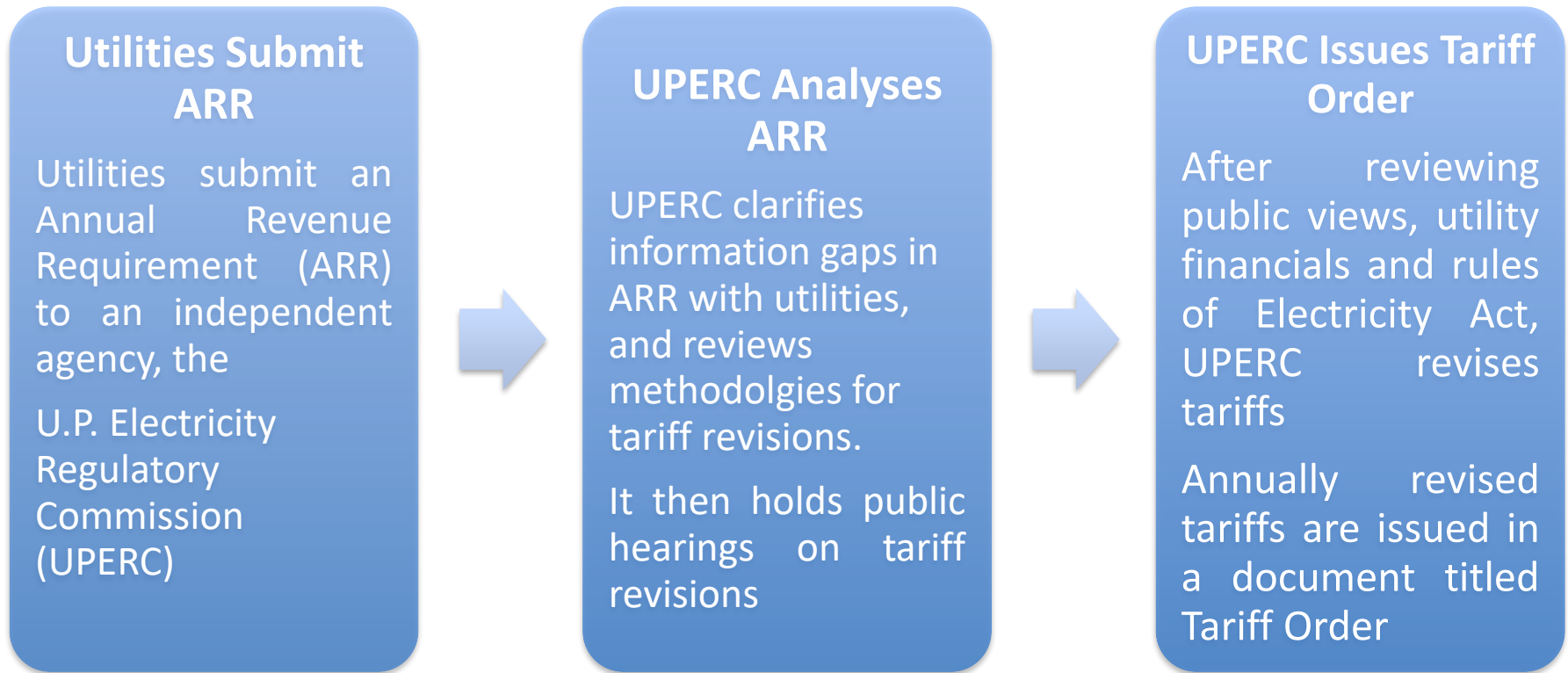


Uttar Pradesh (U.P.) – India's most populous state (199.8 million) with only 44 per cent of households electrified in 2017*

- Like most Indian states, Uttar Pradesh's electricity utilities have **twin challenges**
 1. Target of achieving universal household electrification before March 2019
 2. Simultaneously, ensuring financial sustainability of electricity utilities i.e. revenue recovery from consumers matches the cost of electricity supply
- Historically, **utilities have not been able to charge the true cost of electricity** to generate revenue leaving them financially unsustainable with a revenue gap peaking in FY16 at INR 21,486 crores (US\$ 3.3 billion).
- Electricity **tariff setting mechanism routinely influenced** by state governments, state departments and political parties
- If tariffs are not routinely reformed, how can universal household electrification be achieved in a financially sustainable manner?

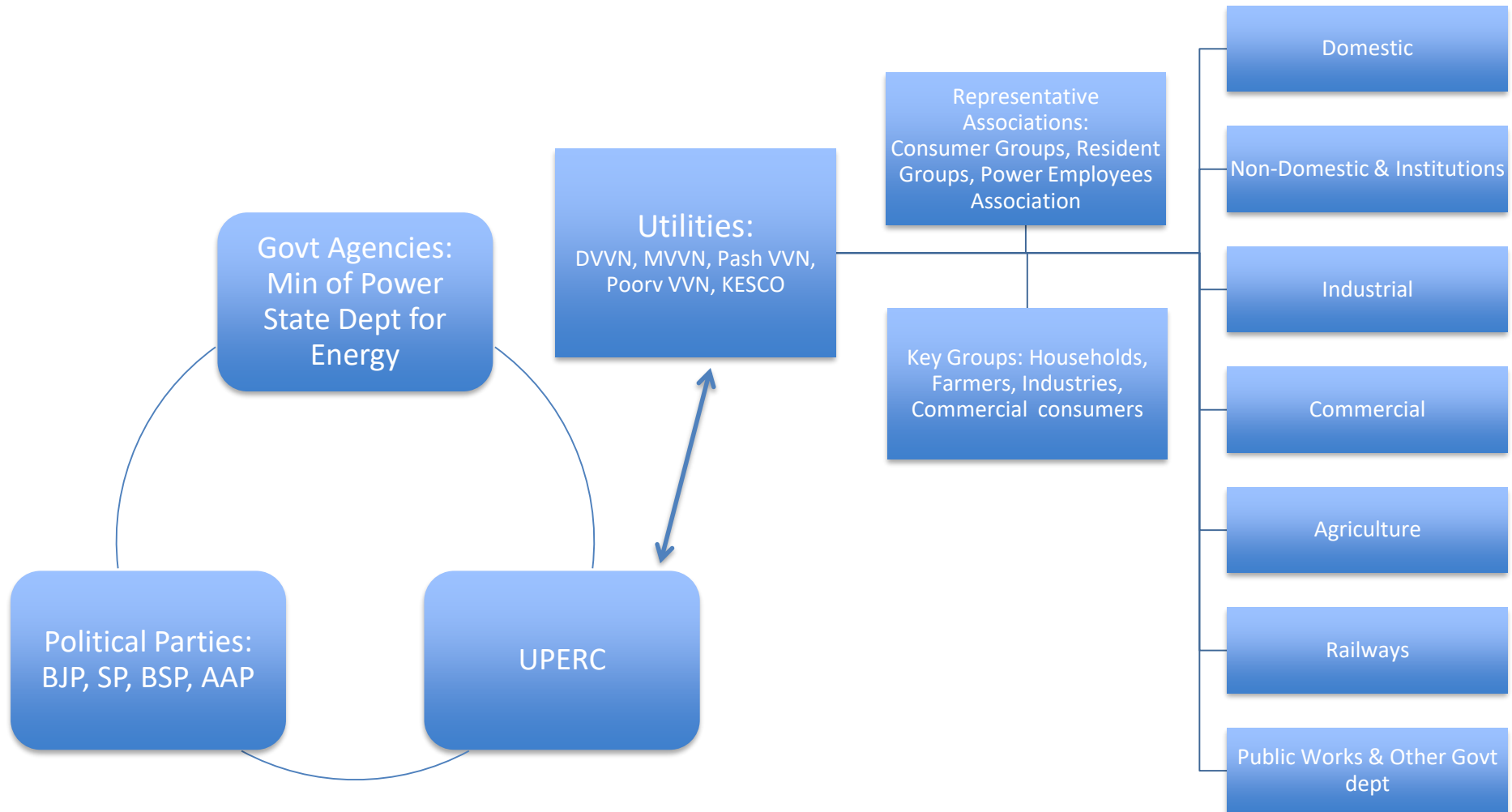


Electricity Tariff Setting Mechanism



However this tariff setting mechanism is influenced by several stakeholders

Power Mapping: Identifying Stakeholders



Examples of Influencing



Tariff Revisions Halted

- Tariff setting mechanism is routinely halted or delayed before state elections. Seen in 2002, 2012 and 2016.
- Ruling political parties influence state owned utilities to delay submitting the ARR to the UPERC (the first step in tariff revision) or delay submitting their financial accounts

Price Subsidies are used as Political Sops

- Ruling parties adopt populist measures, leaving the implementation of reforms as a problem for succeeding governments
- Before elections, they announce reduced residential tariffs, free electricity to select voter groups like power loom weavers

Tariff Revisions Met with Public Protests

- Occasionally, tariff hike announcements are met with protests and marches.
- They ask for roll backs and try to meet the state government to push for their demands

Power Mapping: Interest Influence Matrix

Low Interest/ High Influence

Industrial Consumers
Commercial Consumers
Rural Households
Umbrella Organisation of Consumers
Electricity Employees
Bahujan Samaj Party
Residents of Political Constituencies

High Interest/ High Influence

UPERC
Discoms
Ministry of Power
Bhartiya Janta Party
State Energy Department
Media

Low Interest/ Low Influence

Aam Admi Party
Farmers
Informal Resident Groups
Urban Households
Electricity Employees

High Interest/ Low Influence

Central Agencies - Niti Ayog,
Ministry of Finance

Opportunities for Tariff Reform: A study of consumer attitudes

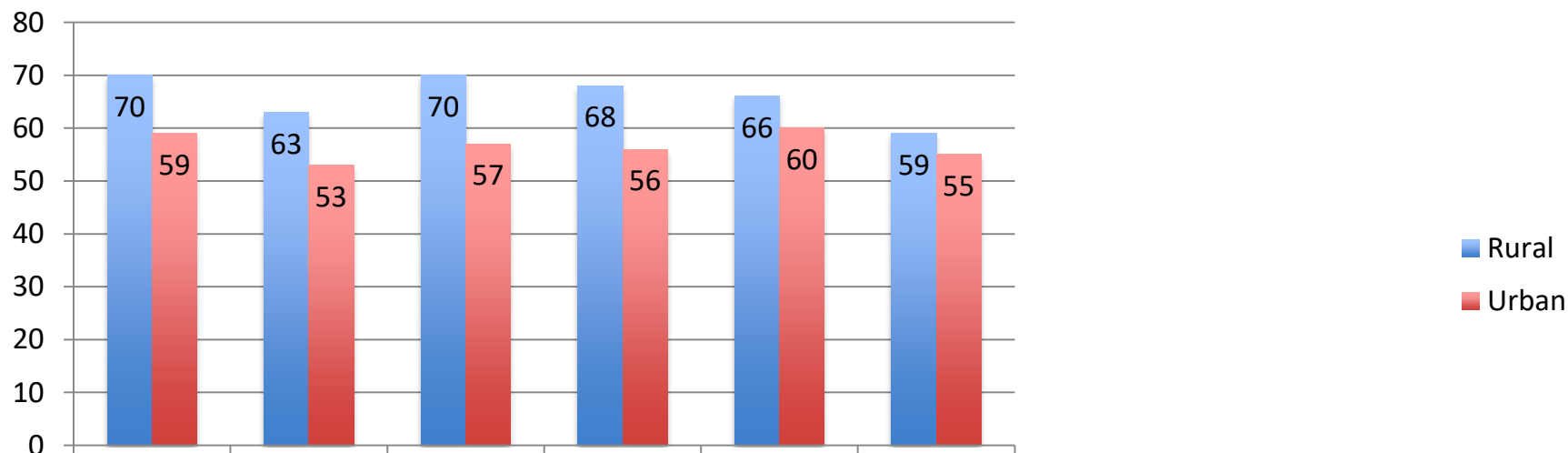


- 76 per cent of U.P.'s electricity demand mix is formed of households, agricultural consumers, and commercial and industrial firms.
- Studying attitudes of consumers can help identify opportunities for introducing tariff reform
- Research includes consumer views on:
 - experiences as electricity consumers,
 - perceptions on subsidies and tariff reform,
 - coping mechanisms against tariff hikes and
 - means to channel influence
- **Using Insights: choosing a narrative for tariff reform & designing compensation**
- Quantitative survey: 1917 households and 413 agricultural landowners using electric (129) and diesel pumps (284)
- Interviews: 67 agricultural landowners using electric pumps, 34 industrial and 31 commercial firms

Opportunities for Tariff Reform with Households



- **No generalized sense of entitlement to free electricity –**
 - 60% and 75% of rural and urban households believe that electricity should not be provided free of charge to all.
 - 80% HHs of both groups believe that the government should provide free electricity only to the poor
- **Frequency of tariff hikes:** One time increase: 75% urban, 59% rural respondents prefer a one-time immediate increase as opposed to monthly hikes
- **Conditions under which households are willing to pay more for electricity:**



government officials / government officials / government officials / electricity bills / electricity bills / electricity bills through direct benefit/bank transfers

Opportunities for Tariff Reform with Farmers



- **Low awareness of subsidised electricity –**
 - 32% of electric pump users believe that it does so through customer fees alone
 - Only 7 out of 67 interviewed were aware that electricity tariffs for farmers were subsidized.
- **Frequency of tariff hikes:** 70% of electric pump farmers prefer to have a ‘single’ increase of their electricity bill if necessary
- **Conditions under which farmers are willing to pay more for electricity:**
 - 70% of respondents think this a highly unreasonable to pay higher tariffs for the utility to better cover its costs
 - For 55% farmers tariff hike will be acceptable if it is directly linked to an increase in hours of supply, a more stable voltage, or if the revenue from higher tariffs can help supply power to other farmers or villages

Opportunities for Tariff Reform with Industrial & Commercial Firms



- **Views on Cross Subsidy:**
 - 81% industrial and 68% commercial consumers are not in favour of continuing the current trend of cross-subsidy
 - Yet, industrial consumers (52%) are more in favour of providing subsidies to farmers and poor households compared to commercial consumers (35%)
- **Frequency of tariff hikes:**
 - 80% consumers prefer tariff hike every 2 to 3 years to control profits on their long term manufacturing and production cycles
 - Unpredictable hikes prevent passing costs on to consumers
- **Conditions under which firms are willing to pay more for electricity:**
 - 26% firms demanded compensation to offset any tariff hikes – like rebates on rooftop solar to control energy costs
 - Firms also ask for pass through of electricity tax as tax credit under the new taxation mechanism

Using the Results: Designing a Tariff Reform



Utilities can Create a Communication Strategy:

- Attitudes to electricity pricing are sensitive and communications can play a key role in building the political space that enables reform
- A long-term strategy focused on awareness-raising on extent of subsidy received
- Short-term strategies focused on specific initiatives to pass through higher tariffs

Choosing a narrative

Communication campaigns should focus on what is important to consumers, rather than the financial health of discoms

Prepare compensation measures

investigate targeted compensation mechanisms - cash transfers for households, solar irrigation schemes for farmers; incentives on solar for commercial and industrial consumers



Thank You

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