



# Electricity Tariff Reform in Uttar Pradesh, India

*Challenges & Key Findings*  
*May 2018*

# Electricity Subsidy Reform in India



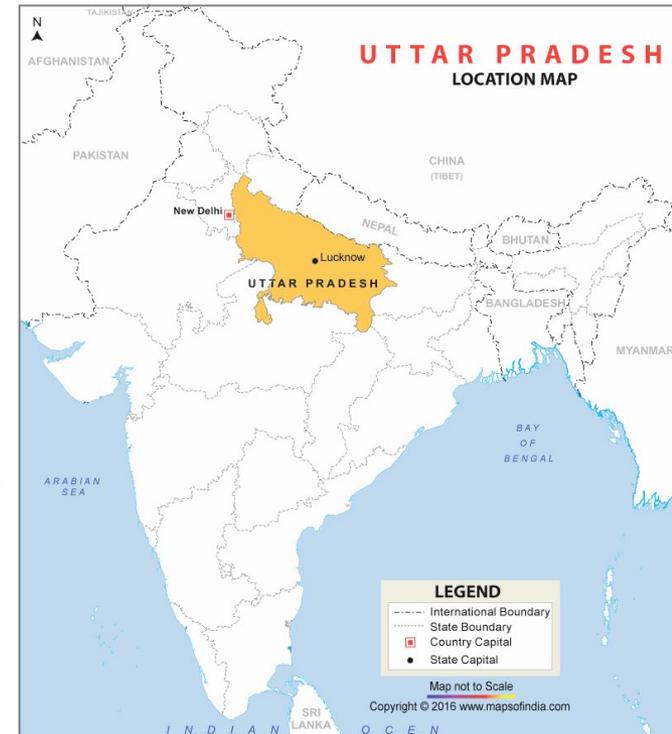
- 80% of India's electricity is generated from coal and therefore need attention
- Because of coal's dominance, subsidies to the electricity sector therefore support fossil fuel based electricity
- Electricity subsidies to transmission and distribution in India increased US\$ 6.7 billion in FY2014 to 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

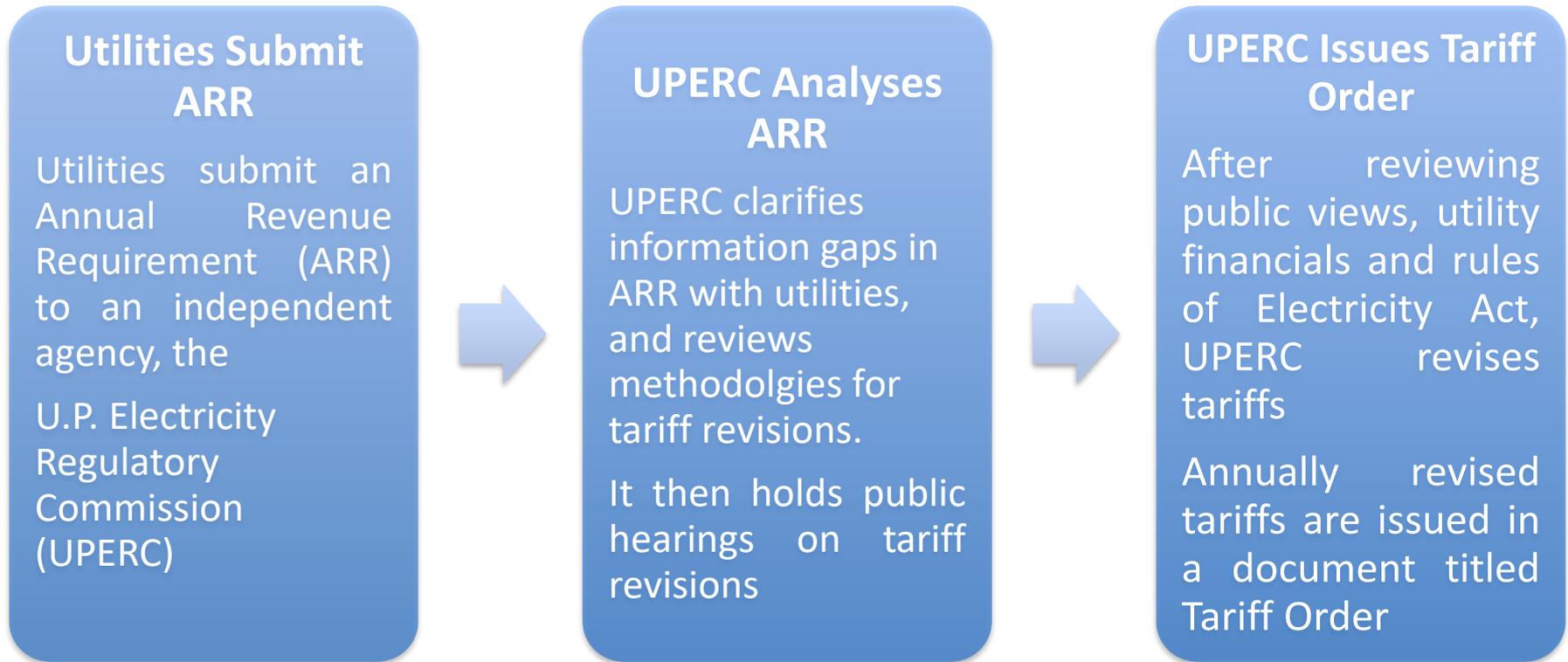


Uttar Pradesh (U.P.) – India's most populous state (199.8 million) with only 44 per cent of households electrified in 2017\*

- 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?

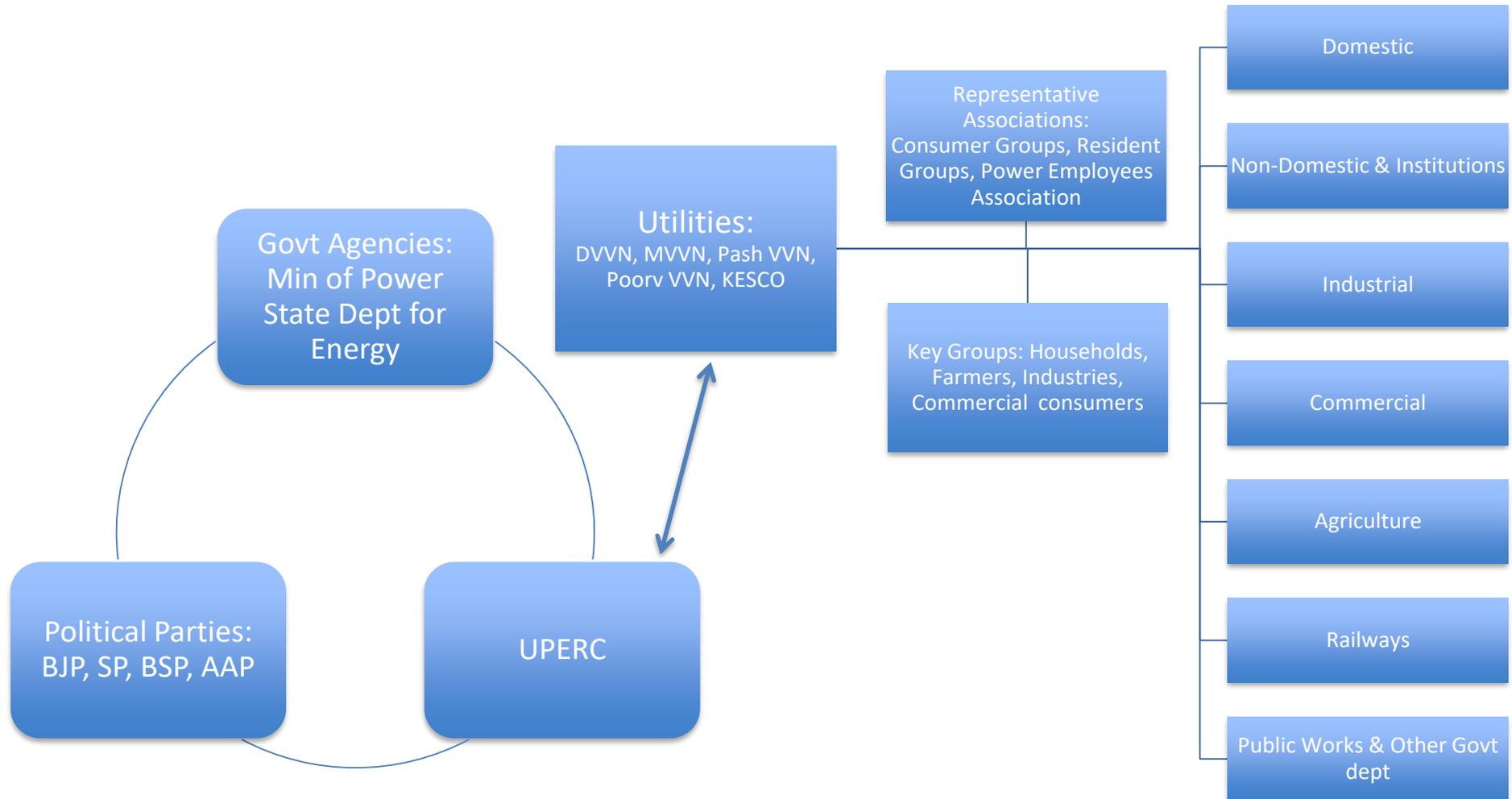


# Electricity Tariff Setting Mechanism



*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

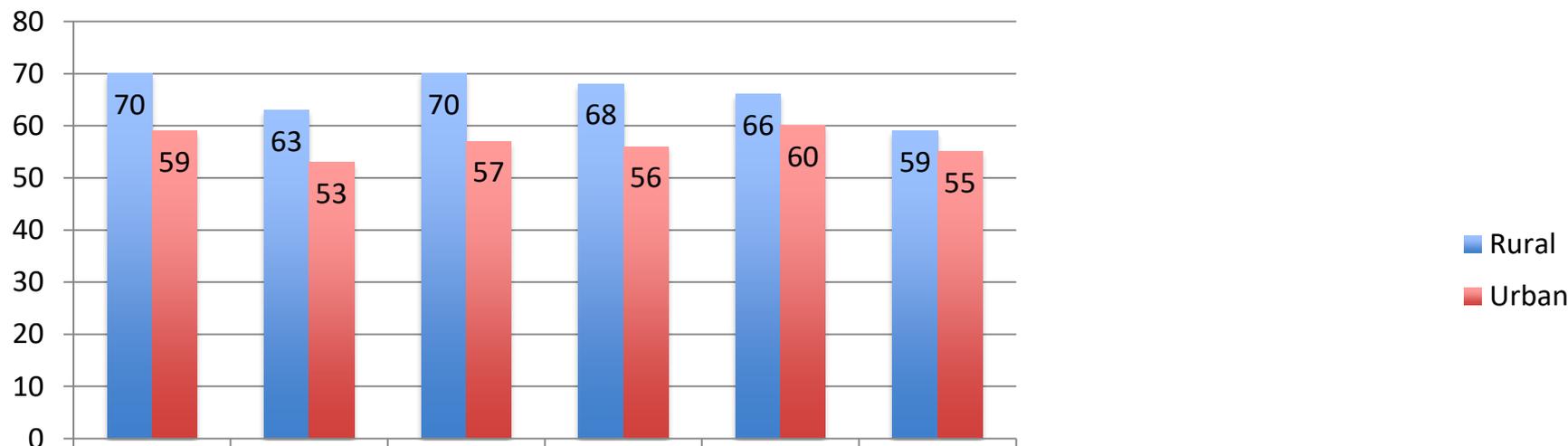


- 76 per cent of U.P.'s electricity demand mix is formed of households, agricultural consumers, and commercial and industrial firms.
- Studying attitudes of consumers can help identify opportunities for introducing tariff reform
- Research includes consumer views on:
  - experiences as electricity consumers,
  - 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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