

# High Pressure Cogeneration for Sugar Sector in Pakistan



### Background

- Initiated by the European Union and in line with the Regional Strategy for Asia 2007-2013, managed by EuropeAid
- Promote sustainable consumption and production practices in Asia by mobilizing the private and public sector

### Priority Focus

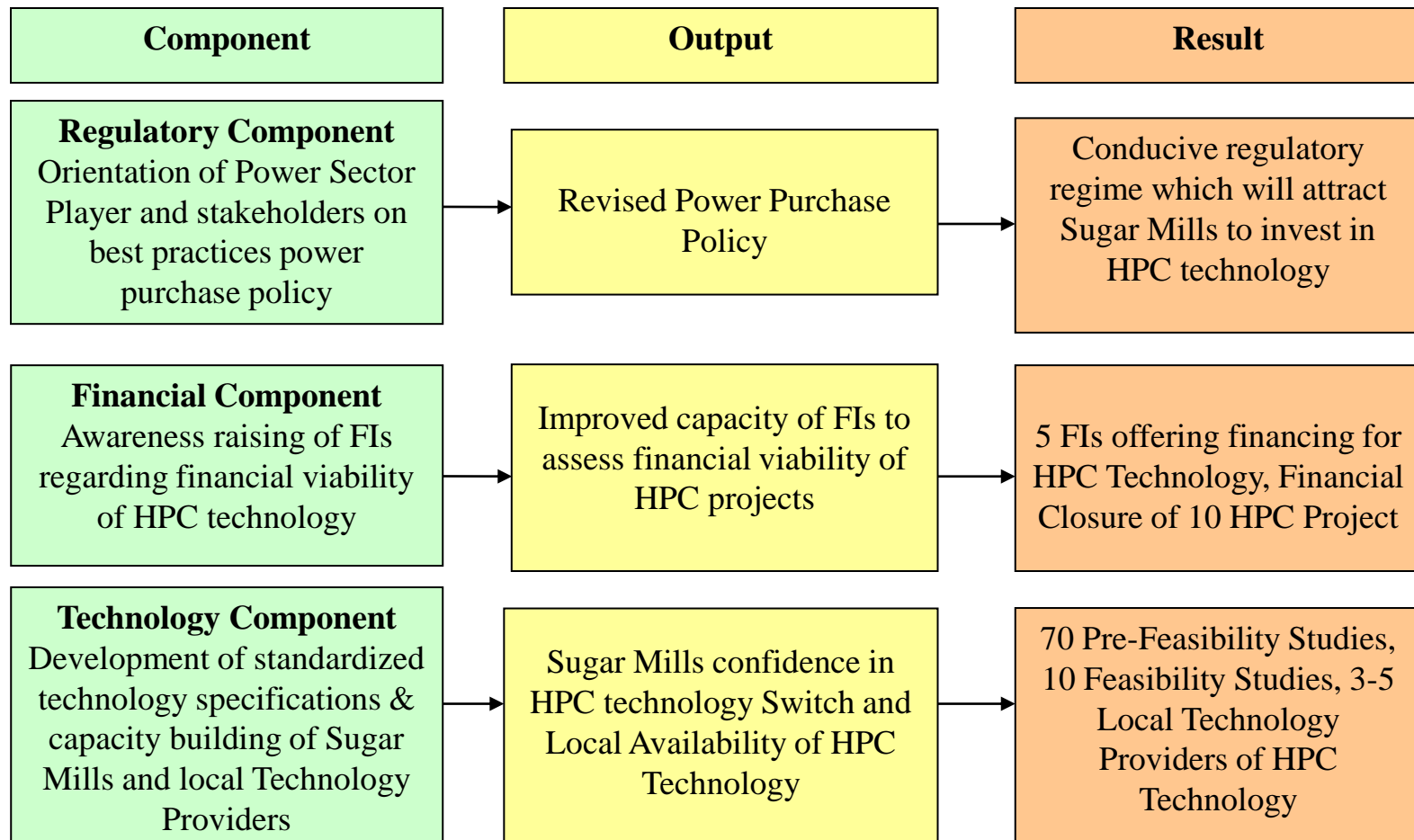
- Move SCP efforts from demonstration to replication
- Catalyze a shift in policy making towards sustainability

## Project Objective

- Promote sustainable production of energy, for export of surplus electrical power to the national grid, through replication of existing high pressure cogeneration technologies in the sugar sector
- Promote sustainable consumption of bagasse by supporting sugar mills in the adoption of high pressure cogeneration technology through
  - Technology standardization
  - Enabling access to finance
  - mobilization of relevant public sector authorities for the formulation of a conducive regulatory regime for bagasse based power projects.

## Project Partners

1. IHT Pakistan
2. The Energy and Resource Institute India
3. Sequa Germany
4. Pakistan Sugar Mills Association



## Activities

- Establishment of a National Bagasse Power Support Cell at the PSMA, to offer technical, financial and regulatory assistance to its members,
- Development of standardized technical specifications based on regional best practices for high pressure equipment design and operation, and preparation of project implementation tender documents based on consultation among technology providers and sugar mills,
- In-house trainings and capacity building of Technology Providers to develop standardized HPC technology solutions

## Activities

- Training of technical staff of sugar mills on standardized design and technology selection
- Development of business cases of technology switch to HPC for 70 sugar mills
- B2B linkages between local and Indian technology providers of HPC systems

## Outputs

- 3-5 local technology providers offering technology solutions for HP Cogeneration
- Sugar sector trained on HP technology selection and project management
- 70 pre-feasibilities for HP cogeneration systems developed, resulting in feasible business and investment plans

HP Cogen-Pak conducted three Phases In-house training for technology provider HMC, KSEW & Fabcon to enhance their indigenous capacity in thermal and mechanical design of HP boilers and design accessories of HP boiler etc.



Training at HMC, Taxila



Training at KSEW, Karachi



Training at Fabcon, Lahore



### Activities

- Financial risk assessment of bagasse based power projects
- Development of toolkits for SBP's Schemes for Financing Power Plants Using Renewable Power, and the Credit Guarantee
- Trainings of the 5 major FIs in Pakistan on bagasse based co-generation projects and developed toolkits
- Training of sugar mill financial departments on toolkits and CDM

- HP Cogen-Pak project team including international expert held a series of meeting with the commercial banks of Pakistan & financial institute to ascertain their existing lending practices and documented their concerns in financing HPC projects.



Meeting with Habib Metropolitan Bank, Karachi.



Meeting with Meezan Bank, Karachi



Meeting with Pak Brunei Investment, Karachi.

## Component 2: Improving Access to Finance

- Ensuring financial closure for 10 HPC projects,
- Development of project design document for CDM financing for 10 projects

### Outputs

- 5 FIs offering services to finance sugar sector HP cogeneration projects
- Capacity building of the sugar sector to avail financial opportunities

Sugar Mills Name	Sugar Mills Name
1. Shahtaj Sugar Mills Ltd.	2. Bandhi Sugar Mills (Pvt. ) Ltd.
3. Safina Sugar Mills Ltd.	4. Faran Sugar Mills Ltd.
5. TYA Sugar Mills (Pvt.) Ltd.	6. Ansari Sugar Mills (Pvt.) Ltd.
7. Shakarganj Mills Ltd.-I	8. Shakarganj Mills Ltd.-II
9. Mirpurkhas Sugar Mills Ltd.	10. Mehran Sugar Mills Ltd.

### Activities

- Establishment of Multi-stakeholder platform for bagasse based power systems
- Orientation of NEPRA on regional Best Practices of tariff determination for bagasse power projects, especially India, through regional stakeholder consultations
- Development of toolkit for swift tariff determination and approval for bagasse based projects
- Conducting Multi-stakeholder consultations on the adoption of a New Power Purchase Policy (i.e. Upfront Tariff)

### Outputs

- Improved process for tariff determinations
- Improved policy environment for bagasse based cogeneration projects

- HP Cogen-Pak Project organized the Capacity Building Program for NEPRA official from 7<sup>th</sup> September 2015 to 11<sup>th</sup> September 2015 in NEPRA Tower Islamabad. Training was provided by the experienced consultants from TERI, India.



# Thank You for Your Kind Attention

