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**CASA** → 1000



# **CASA-1000**

November 2016  
Almaty



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## Why CASA-1000?

- supply electricity from Central Asia to South Asia
- first step towards a regional energy market
- develop inter-regional cooperation
- environmentally friendly
- boost regional development





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## **CASA-1000 New Configuration**

### Package 1.

- **1300 MW AC/DC Converter Station** at Sangtuda (Tajikistan).
- **1300 MW DC/AC Converter Station** at Nowshera (PK).

### Package 2.

- **500 kV B2B station in Pul-e-Khumri (AF)** to be supplied through existing 220kV AC line from Sangtuda (TJ)

### Other Packages

- Different segments of new HVAC and HVDC transmission lines and strengthening of existing HVAC lines



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## **Security increase, technical complexity decrease**

### **1. Security mechanisms**

- Direct and indirect measures developed

### **2. Simplified technical solution**

- Switching from a three to a two terminal station configuration

### **3. O&M**

- O&M services to be procured independently



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## Kyrgyz Republic's role

- Kyrgyz will contribute average 1.55 billion kWh
- Superior supply flexibility/manageability due to Toktogul Reservoir

## Kyrgyz Republic's benefits

- Cash from power sales at much higher prices.
- Future fees as power transiter between the Kazakhstan, Uzbekistan, etc., and CASA-1000.
- Economic and diplomatic ties to South Asia.
- Economic benefits to Afghanistan, Pakistan, enhance security



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## Tajikistan's role

- Largest power supplier at 2.75 billion kWh per year
- Wheeler of power from Kyrgyz Republic through its system to AC/DC converter station at Sangtuda

## Tajikistan's benefits

- Cash from high priced sale of power that now is not generated at all because of lack of market. Of the four countries, Tajikistan will see the largest income increase.
- Economic and diplomatic ties to South Asia.
- Economic benefits to Afghanistan, Pakistan, enhance security



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## Afghanistan's role

- Power transiter
- Some power purchase

## Afghanistan's benefits

- Establish itself as reliable transit country
- Transit revenue.
- Improved ties with Pakistan and Central Asia



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## Pakistan's role

- Principal buyer
- Real source of operating cash flow

## Pakistan's benefits

- MWh bought at \$80-100\* each displace fuel-only costs of oil fired generation of \$160-180 each
- Project operations will fund increased stability in Afghanistan
- Economic, diplomatic ties to new resource-supplier countries in Central Asia





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## Contracting Status

- Owners Engineers
  - For DC—GFA/Manitoba Hydro (Canada): Rebidding
  - For AC—Monenco (Iran) – Contract Signed
- Converter Stations
  - New tender documents released October 6, Bids due early 2017
  - Back to Back tender documents being prepared
- DC lines
  - Afghanistan lines under negotiation
  - Other lines: tender documents under final preparation
- AC lines
  - tender documents under final preparation



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# Thank you

**Robert Schenck**  
**CASA-1000 Executive Director**

**E-mail: [robert.schenck@energylinks.org](mailto:robert.schenck@energylinks.org)**  
**Phone: +7 771 502 9998**