



Central Asia South Asia Regional Electricity Market (CASAREM)

**CASA-1000 Project
March 2012**



Coverage of Presentation

1. CASA-1000 Project Background
2. Main Findings of Techno-Economic Feasibility Update Study
3. Project Preparation Activities



CASA-1000 Background

Milestones

- **2004** – Regional Electricity Export Potential Study (REEPS) identifies South Asia as a major export market for surplus electricity from Central Asia
- **2006-2008** –Afghanistan, Kyrgyz Republic, Pakistan and Tajikistan sign MOU & Inter-Governmental Agreement (IGA) establishing Inter-Governmental Council (IGC) and its Secretariat



CASA-1000 Background (Cont'd)

Milestones

- **2008-2009** – ADB-financed initial Feasibility Report prepared covering export of 1000 MW but certain issues were not fully resolved
- **2010** – Decision taken to update the techno-economic feasibility and carry out an environmental and social impact assessment
- **Feb. 2011** – Updated Feasibility Study confirms technical and economic viability of the project



CASA-1000 Background (Cont'd)

Existing Structure to support the Project

- **IGA** – Inter-Governmental Agreement is a comprehensive legal document laying out the principles and procedures of project development
- **IGC** – Inter-Governmental Council established in July 2008 with its Secretariat
- **IGC Secretariat** – Working level permanent entity based in Kabul and staffed with Executive Director and representatives of the four Countries



Feasibility Update Study

Status

- Draft final report submitted by SNC-Lavalin in November 2010
- Comments provided by Countries and others (IGC Secretariat, IsDB & WB) in December 2010
- Comments discussed in IGC meeting on January 5, 2011
- Final Report submitted on February 22, 2011



Feasibility Update Study

Main Findings (1)

- Study evaluates that, in 2016, *available annual summer surpluses* will be about **2.15 TWh** in the Kyrgyz system and about **3.75 TWh** in the Tajik system
- Surpluses will be concentrated in the months of **May to September**, with limited contribution in April
- Exportable surplus will depend on CASA transmission capacity – about **4 TWh in 2016** for 1300 MW line
- **Surplus reduces to half** in about 12 years due to assumption of no new generation capacity added



Feasibility Update Study

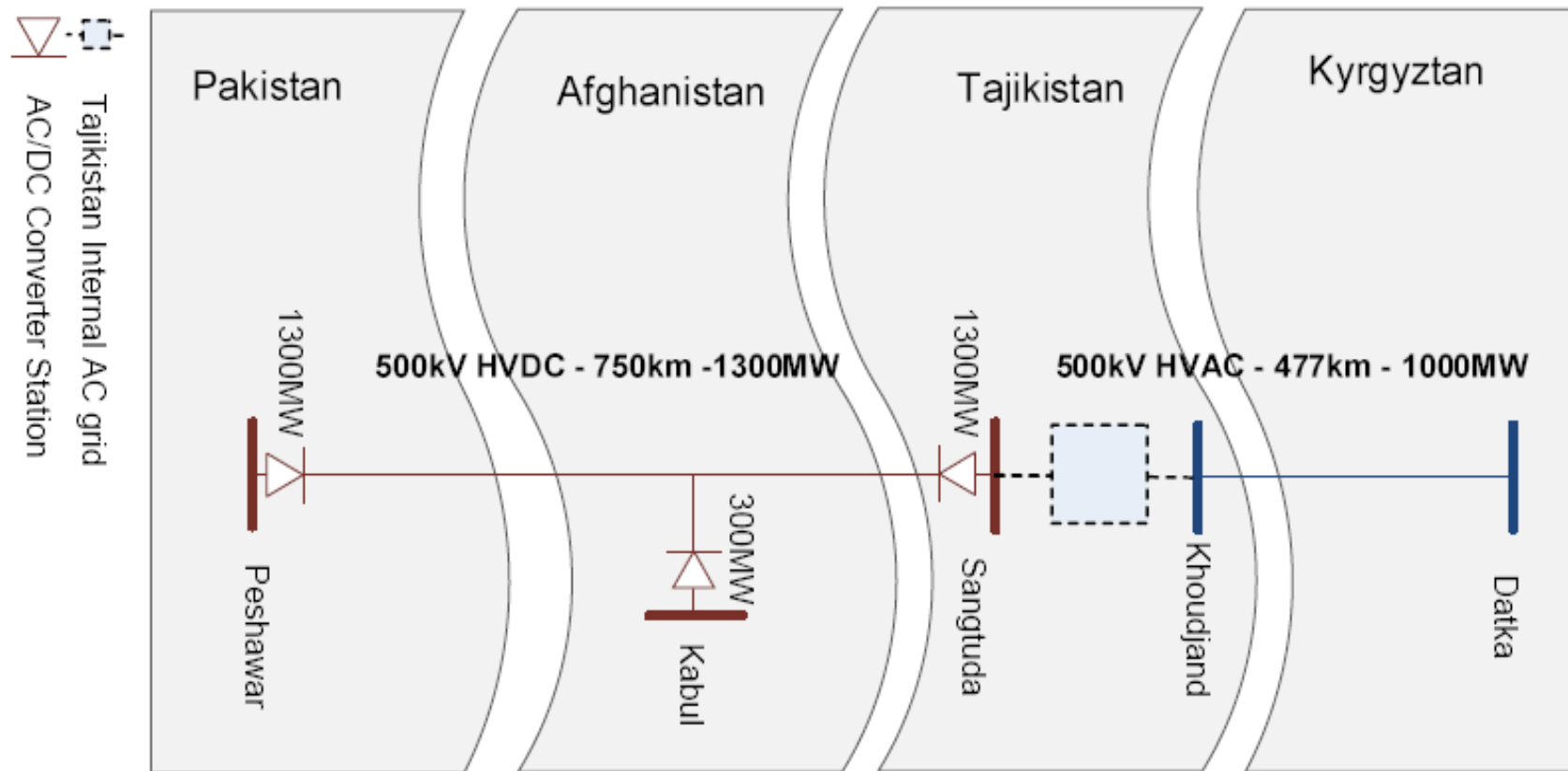
Recommended Project

- 500 kV line Datka-Khudjand (477 km), with Tajik network transferring Kyrgyz exports to Sangtuda
- 500 kV line (115 km) between Regar and Sangtuda
- 1300 MW AC-DC Converter Station at Sangtuda
- 750 km HVDC line Sangtuda-Kabul-Peshawar
- 300 MW Converter Station at Kabul (*with both import & export capability*)
- *1300 MW DC-AC Converter Station* at Peshawar



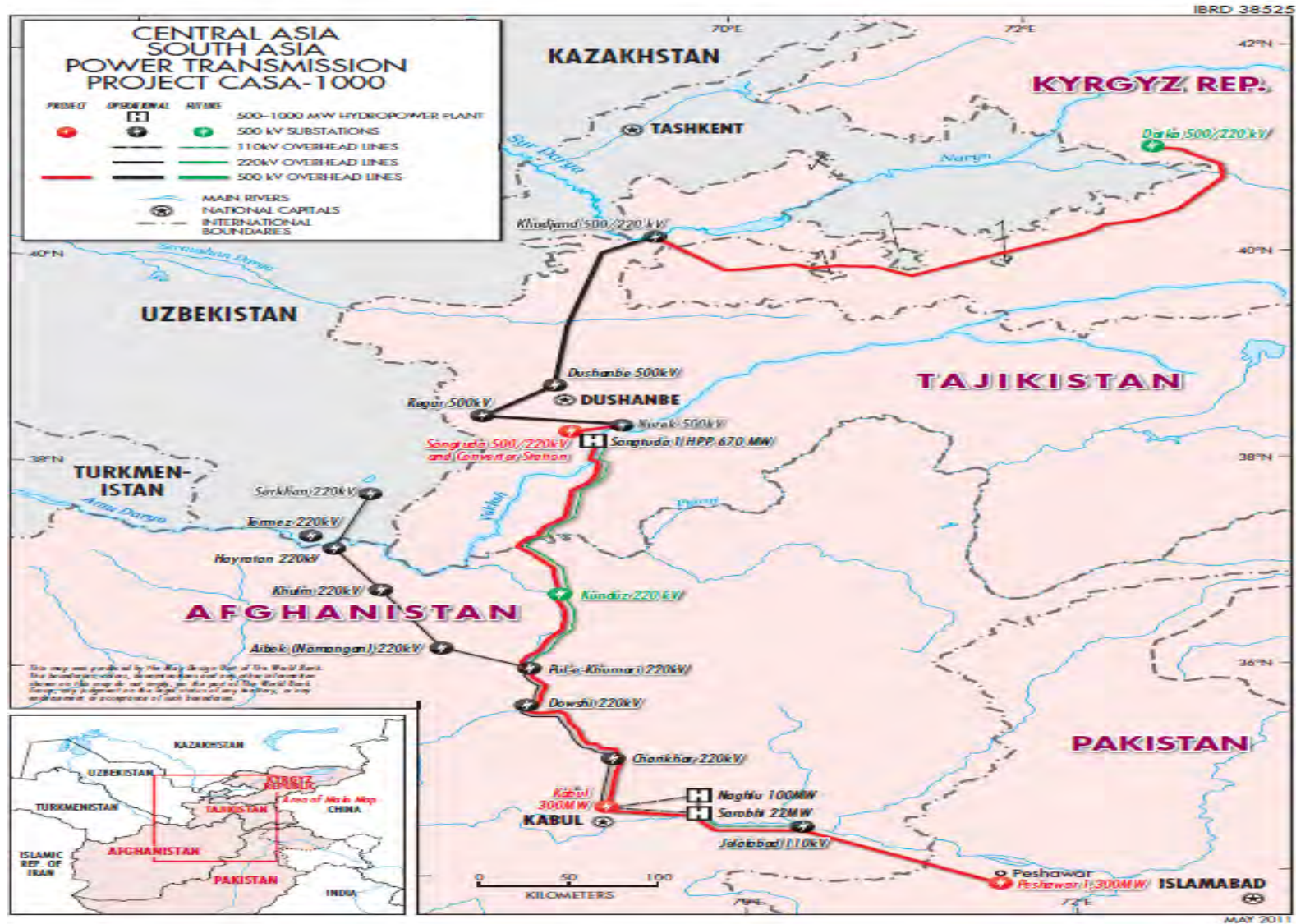
SNC-Lavalin Feasibility Update Study

Recommended Project (Cont'd)





CASA-1000 – Suggested Line Route



Feasibility Update Study

Project Cost & Implementation Period

- The total project cost, including contingencies and IDC, is *US\$ 953 million*
- This *includes cost of reinforcement of internal transmission networks* required for the CASA project, and provisional environmental and social costs
- The *implementation period foreseen is 56 months*, including 36 months for the EPC contract

Feasibility Update Study

Allocation of Project Costs

- *Each Country will cover the cost of the facilities located on its territory*
- Based on this, the cost allocation will be approximately as follows:

Kyrgyz Republic	US\$ 196 Million
Tajikistan	US\$ 251 Million
Afghanistan	US\$ 309 Million
Pakistan	US\$ 197 Million

Project Preparation Activities

- Investment advisors
- Country-specific advisory support for Kyrgyz Republic and Tajikistan
- Security study
- Plan to share benefits with communities
- Support for safeguards implementation