

Erasmus Days 2020

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With the support of the
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03/11/2020

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Introduction-Bhutan

- Landlocked country
- Area 38394 sq.km
- 70% forest
- Population is >740000
- 69% lives in rural areas
- Hydro power -backbone of Bhutan's economy





Introduction contd.

- Present generation more than 2300 MW (CHP-336MW, THP-1020MW, BHP - 64MW, KHP-60MW, DHP- 126MW, MHP-720MW)
- Southern slope of the Eastern Himalayas
- Varying altitudinal (100m to 7550m)
- Perennial flow of water and fair climatic conditions
- Run-of-the river types hydro power are found to be techno-economically least-cost and environment-friendly



Upcoming Hydro powers

- ✓ Present Punatshangchhu I – 1200 MW- Started in 2009
- ✓ Punatshangchhu II – 1020 MW. Started in 2009
- ✓ Sunkosh Reservoir – ~~4060~~ MW. (2560MW)
- ✓ Kuri-Gongri – 1800 MW.
- ✓ Amochhu Reservoir – 620 MW.
- ✓ Kholongchhu – 486 MW -Started in 2014
- ✓ Chamkharchhu I – 670 MW.
- ✓ Wangchhu Reservoir – 900 MW.
- ✓ Bunakha Reservoir – 180 MW.
- ✓ Nikachhu plant- 118 MW - 2015



Power System and Protection

- ✓ Power system and protection becomes important
- ✓ Demand for such engineer will increase
- ✓ Importance of lab
- ✓ Modification of module based on technology
- ✓ Useful to Druk Green Power Corporation, Bhutan Power Corporation and industries



Development of State-of-the-Art Power System Laboratory at CST

- E-learning platform
- Online tests, assessments
- Result generation and analysis





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Thank you



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