



CAREC Energy Consultation Meeting

19 October 2020 - Video Conference

Renewable Energy Cooperation
in Central Asia



Renewable Energy Cooperation in Central Asia – Project Overview

- **Project:** Regional Cooperation on Renewable Energy Integration to the Grid (TA 9365)
 - **Amount:** \$1,500,000
 - **Financed by:** Asian Clean Energy Fund under the Clean Energy Financing Partnership Facility
 - **Participating Countries:** 5 Central Asian Republics + Afghanistan and Pakistan
 - **Status:** completed in June 2020
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Context

To diversify sources of energy supply and address climate change, the countries of Central Asia aim to develop:

1 Cross-border interconnections

Currently

Afghanistan
Kazakhstan
Kyrgyz Republic
Uzbekistan

Coming years

Tajikistan
Pakistan
Turkmenistan

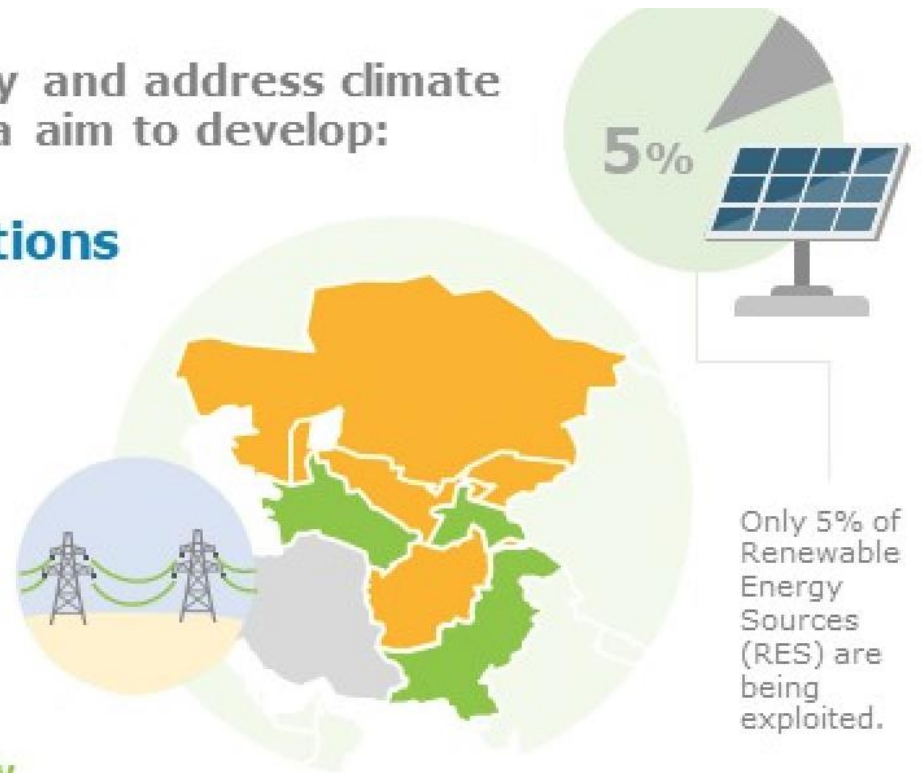
2 Renewable energy

Currently

6_{GW}

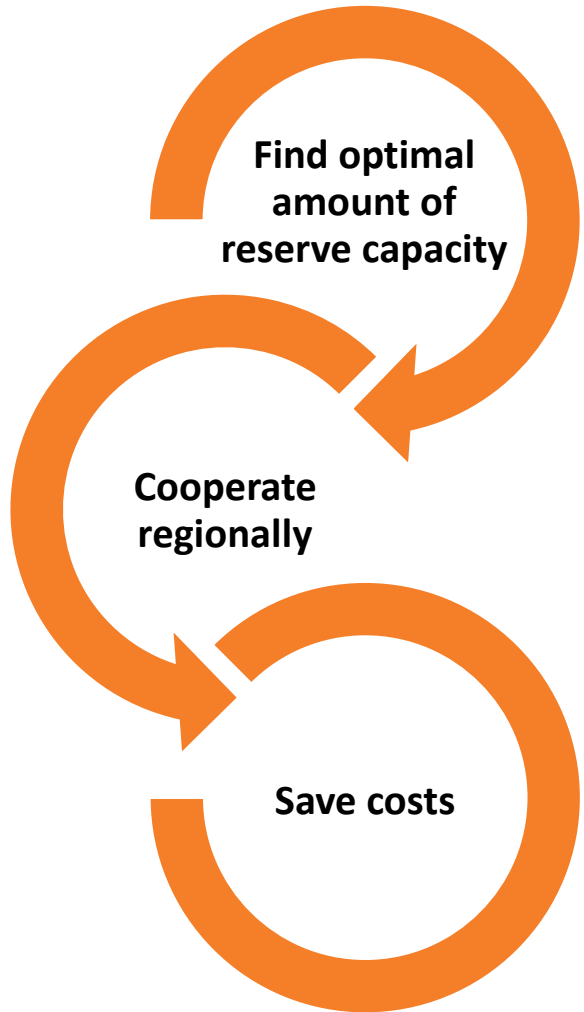
In 2030

20_{GW}





Is there a **regional** solution to mitigate Renewable Energy intermittency in Central Asia?

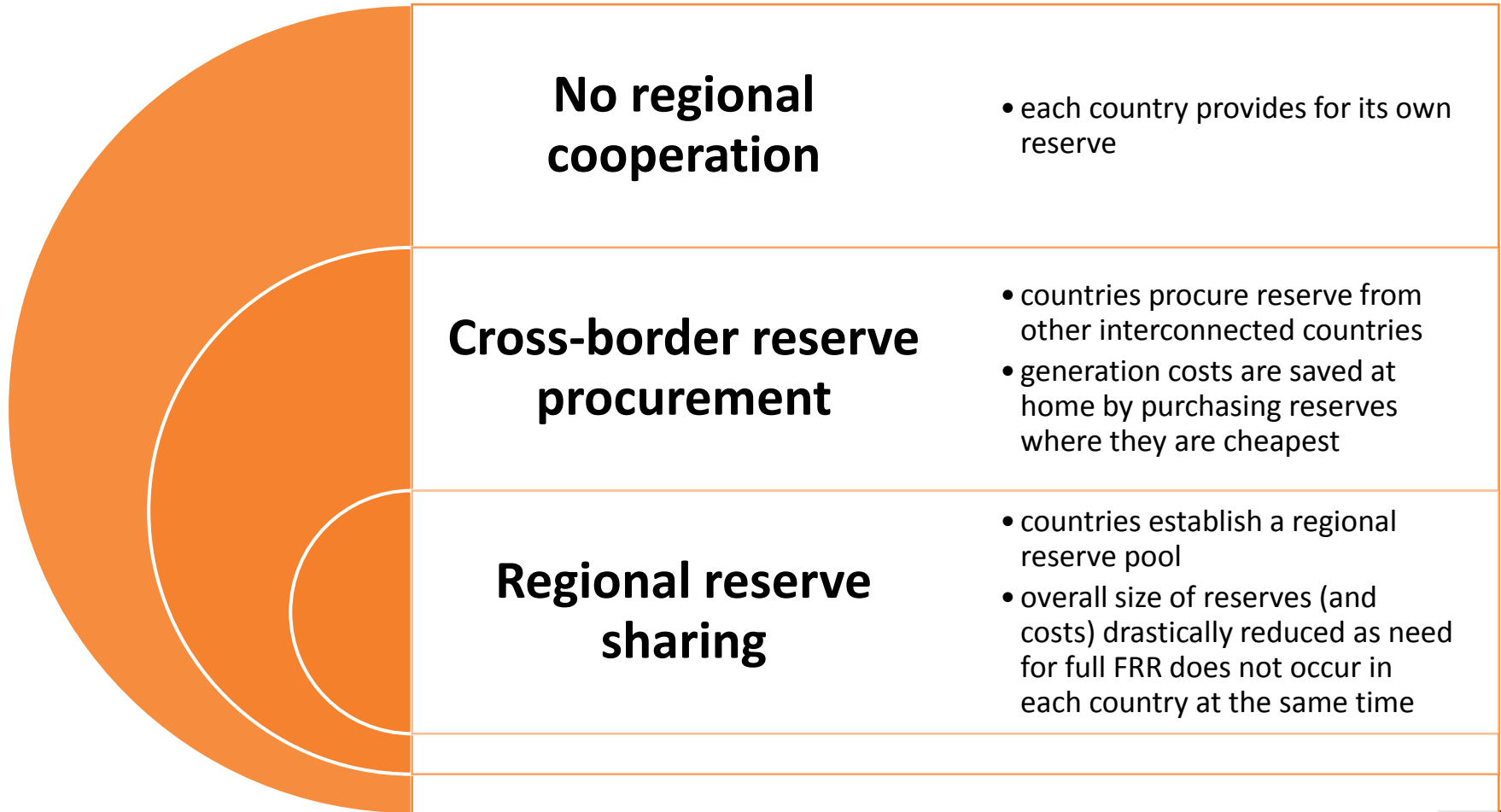


How much back-up capacity will be needed when renewables take off in Central Asia?

How much savings can the region make by sharing its reserves regionally?

What are the key ingredients for making regional cooperation work?

Examined reserve sharing scenarios



Findings

- The already planned **infrastructure and reserve are sufficient** to cope with renewable growth and to compensate grid imbalances
- For operating the interconnected system, it will be necessary to **introduce new legal framework** and common technical rules
- Regional reserve sharing will make it possible to **save \$230million per year**

Benefits are shared on a win-win basis

Increased power system security

- larger systems are more robust and can accommodate energy mix with RES

Lower costs

- power can be sourced from where it is cheapest to produce

Better supply security

- primary energy sources are more diversified

Conclusion: There **is a regional solution** to mitigate RES intermittency in Central Asia



The fear of large intermittent RES volumes can be overcome by:

Quantifying the benefit of regional cooperation

Providing concrete solutions for system bottlenecks

Developing a supra-national regulatory framework



Thank you.

