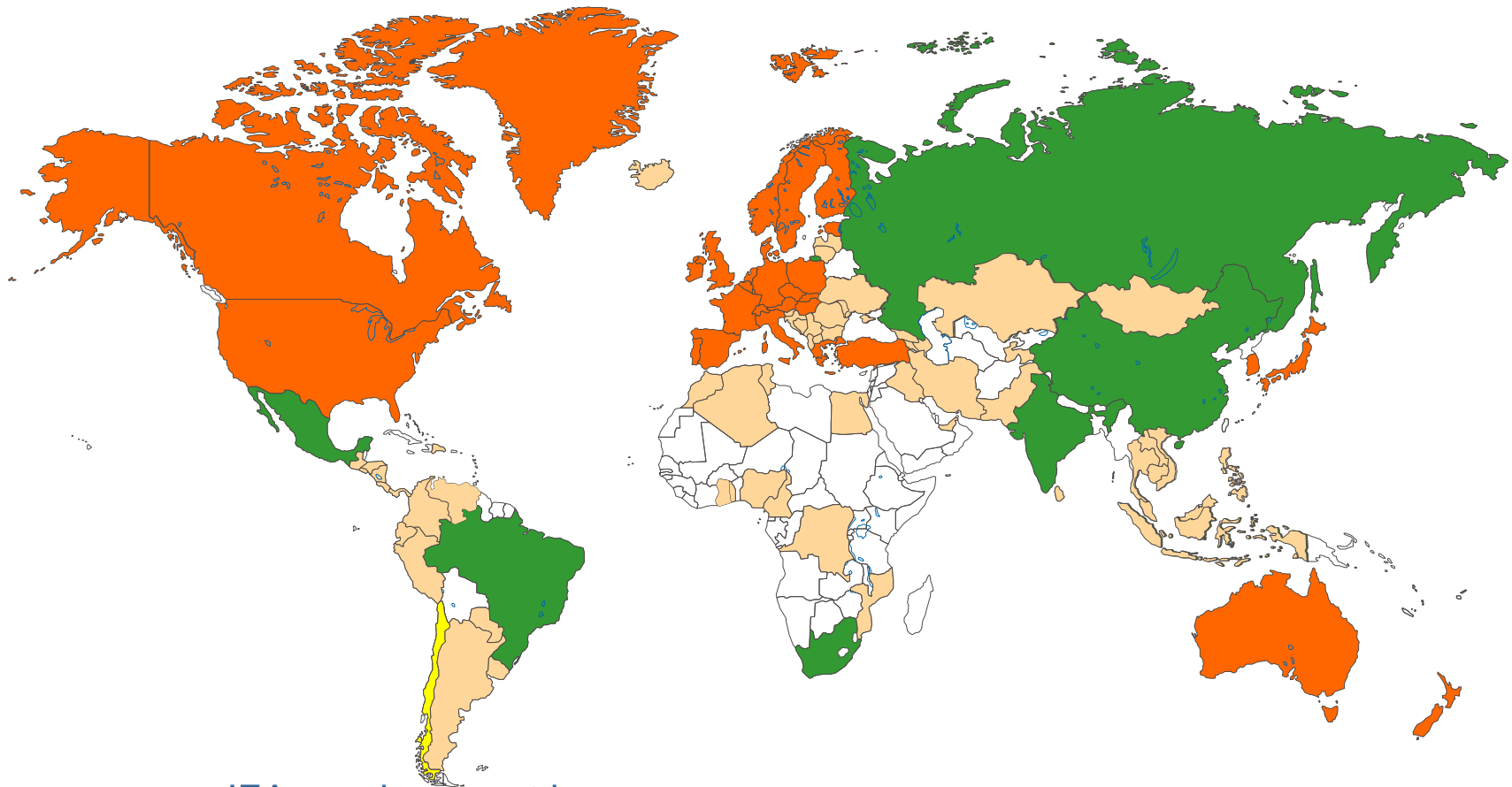# Sustainable energy potential in Central Asia

Marc-Antoine Eyl-Mazzega
Office of Global Energy Policy

Brussels, 06 November 2014

IEA: 29 Members, worldwide engagement

- IEA member countries
- Accession countries
- Key Partner countries
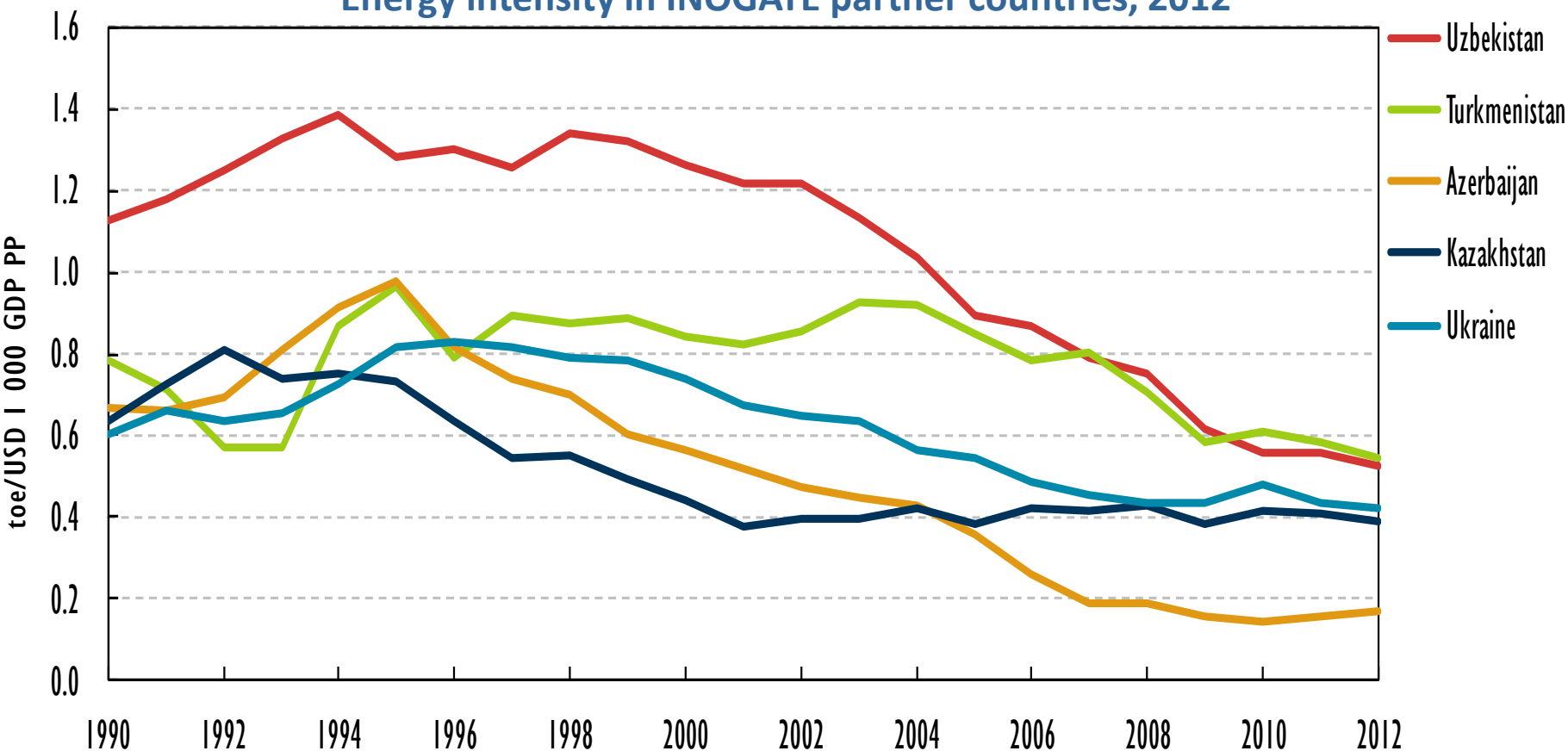- Countries co-operating through IEA programmes

Partner Country Reviews

International
Energy Agency

- **Astana Road Map**
  - 2011 Status Report
  - 2012 and 2013 review cycles; IEA led peer reviews
- **Peer Review teams**
  - IEA experts, INOGATE Technical Secretariat, peer-reviewers from the participating countries, the local INOGATE experts
- **Major objectives**
  - 4 pillars: energy security, sustainable development, investment attraction, market convergence
  - General energy policy and energy balances
- **Short Summary Report in August 2014:**
  http://www.iea.org/publications/freepublications/publication/INOGATE_Summary_FINAL.pdf
- **Compendium publication in Q1 2015**

Common challenges for the region

- Ineffective regulatory frameworks and governance
  - Vague governance structure for energy efficiency policies
  - Lack of energy efficiency & renewable strategies
  - When policies are in place, implementation is weak
  - Missing secondary legislation and technical rules
  - Need to identify barriers and monitor policy progress
  - Weak demand side management, high energy intensity, limitation to gas export potential
  - Harmonization with Custom Union
- Aged energy infrastructure; need for smart investments
- Regional cooperation necessary, but volatile
- Subsidies for regulated energy supplies distort markets
- Very little renewable energy sources except large hydro
- Grid integration of renewables
- Insufficient data collection on the demand side + renewables
- Strong electricity access, but quality of supplies
- Local content rules for renewable development

High energy intensity

- Overall positive trends, yet lack of long-term sustainability
- Need for robust policy actions to reduce intensity, free up resources for exports and modernize the economy

Energy intensity in INOGATE partner countries, 2012

Legend:
- Uzbekistan
- Turkmenistan
- Azerbaijan
- Kazakhstan
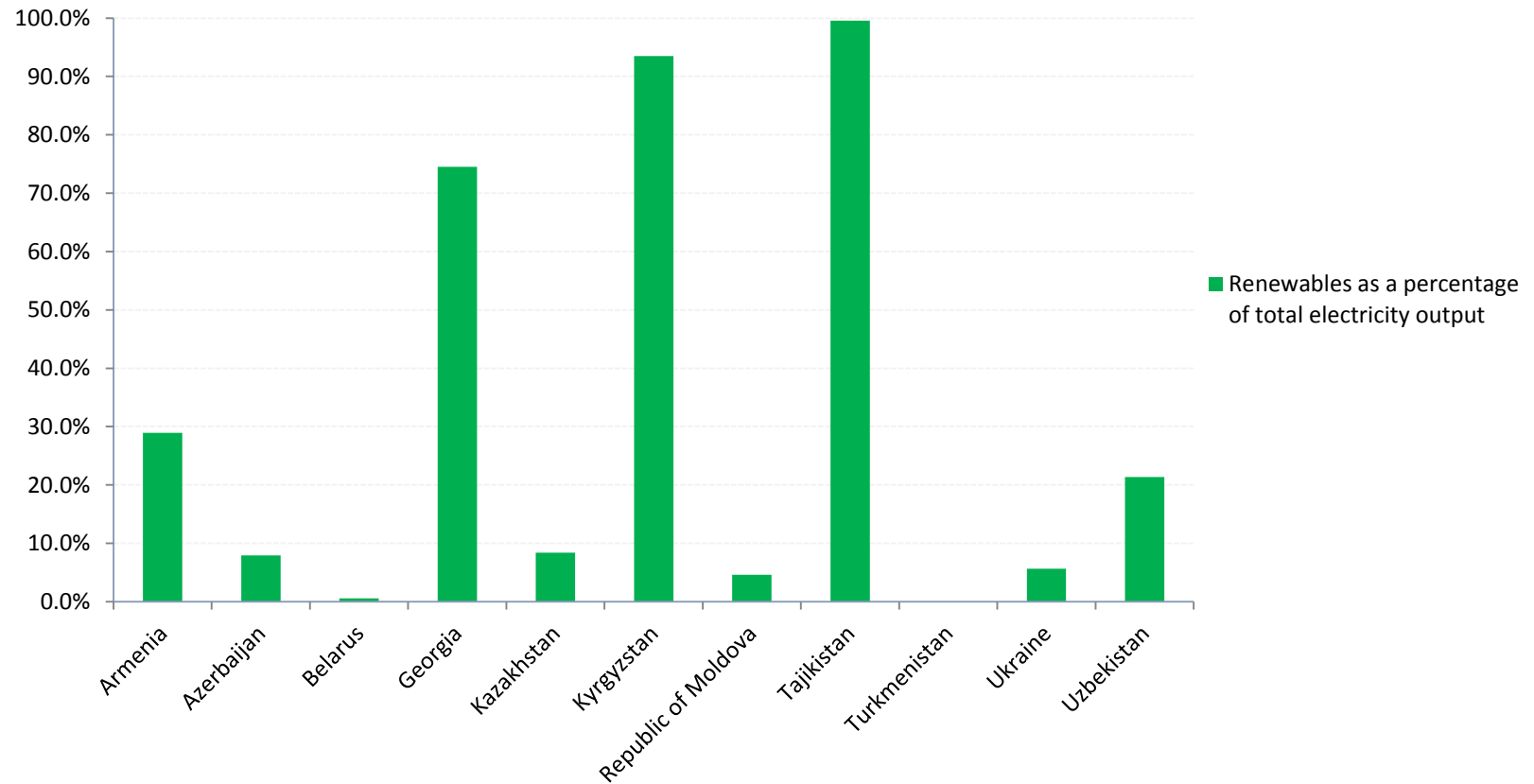- Ukraine

Y-axis: toe/USD I 000 GDP PP

Priorities for improving energy efficiency

- ➢ Establish robust energy efficiency policies and measures: action plans or strategies for the residential, public and industrial sectors

- ➢ Introduce/implement primary and secondary legislation + focus on implementation

- ➢ Improve energy efficiency governance, in particular through independent and effective regulator, and timely implementation of policies

- ➢ Promote funding and incentive mechanisms

- ➢ Progressively raise regulated tariffs while protecting the most vulnerable consumers, remove cross-subsidies

- ➢ Modernization of district heating systems:

  - ➢ Predictable, attractive tariffs that allow to recoup investments

  - ➢ Installing meters: building level heat meters, gas meters

- ➢ Mandatory energy audits for industry conducive to investments and framework for ESCOs

- ➢ Labelling of appliances and buildings

- ➢ Effective framework for homeowner associations

- ➢ Construction standards, building codes, retrofits

- ➢ Energy efficiency indicators to monitor progress

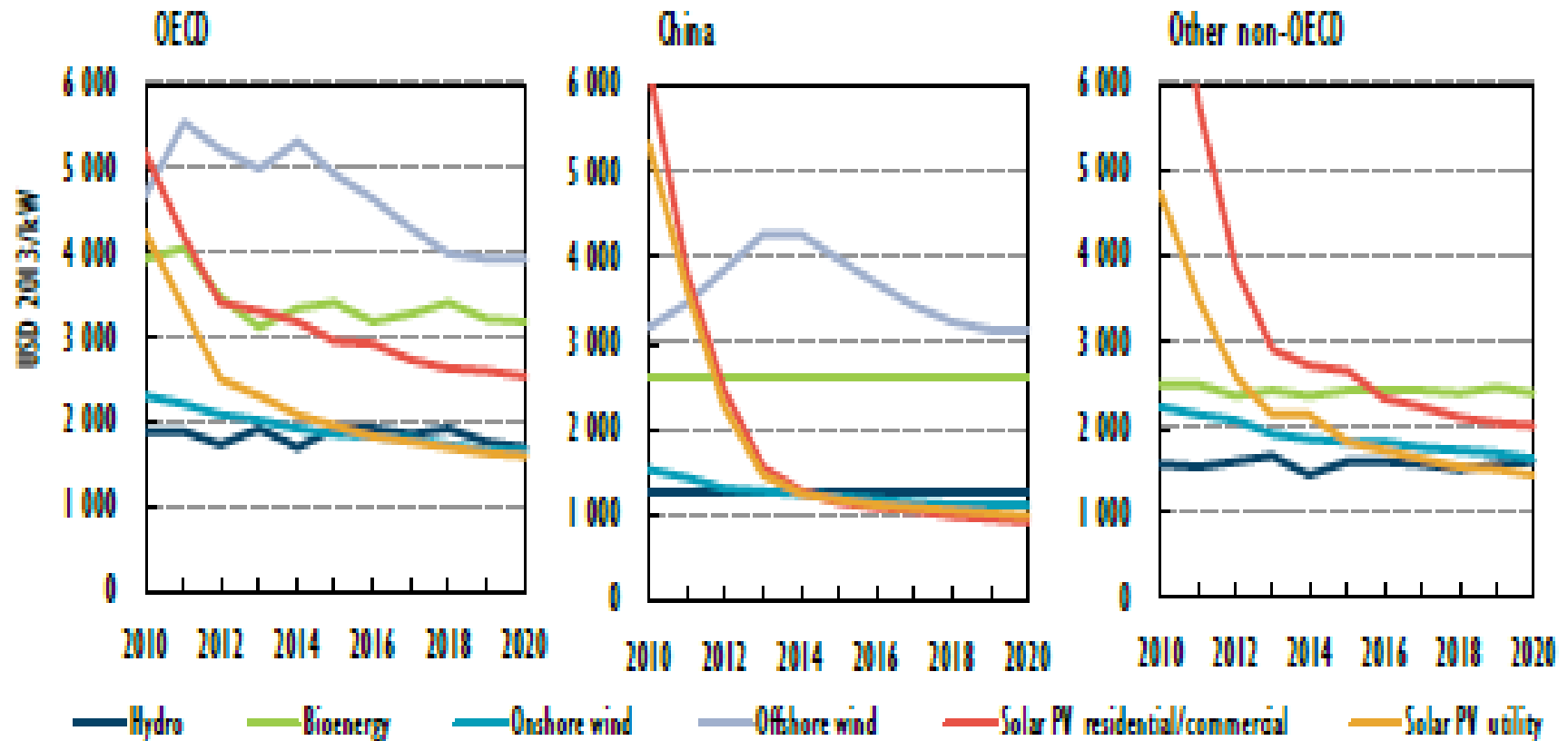- ➢ Capacity building at all levels + awareness of population

Almost absent renewables, hydro exception

Renewable energy as a percentage of electricity generation in INOGATE partner countries, 2012

Legend: ■ Renewables as a percentage of total electricity output

Sources: Energy Statistics of Non-OECD Countries, IEA/OECD Paris, 2013; country submissions.

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Costs of renewable energy sources deployment down

International Energy Agency

Weighted average annual renewable investment costs, historical and projected

Note: kW = kilowatt. Average unit investment costs are based on gross additions, which include capacity refurbishments that are typically lower cost than new capacity. Costs vary over time due to technology changes as well as where deployment occurs in a given year.

Thank you

2014 Medium Term Renewable Energy Market Report
now available!
www.iea.org