Realise final conference

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Policies and measures to accelerate renewables

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Renewables can add new value to the energy mix by ....(1)

... enhancing security of supply - both for geopolitical-concentrated in few countries in critical regions- and infrastructure-power plants, pipeline, sea straits...)

...allowing energy sources diversification & reducing imports for consumers/ deferring production for exporters

...mitigating risks in current energy portfolio and trends, due to volatility and instability of fossil prices;

Renewables can add new value to the energy mix by ....(2)

- ✓ **...creating framework for investment enhancing industrial competitiveness – and opportunities for export**
- ✓ **...creating new jobs, favouring economic development**

- ✓ **...advancing environmental targets;**
- ✓ **...providing unique access to energy services;**
- ✓ **...increasing public participation in energy decision-making**

Create fair market rules

Energy prices do not reflect the true costs of generation options - a market failure:

- the **social and environmental costs** of polluting energy **are not internalised**
- The **added values of RE** for diversification, reduced portfolio risk, job creation, industrial competitiveness **not accounted for**
- there are also **massive subsidies to 'conventional' energy** sources

To acknowledge the benefits of Renewable Energy, **support frameworks are established – not just "subsidies"**

- They should be viewed as **compensation mechanisms** for correcting these market failures and
- **a *learning investments* to reduce cost and improve performance**

National Policy Measures

- **Establish legally binding targets** for renewable energy

  Essential for maintaining and further ***stimulate investor confidence***

- **Establish incentive mechanisms** which provide **defined and stable returns for investors**

  Definition *of technologies admitted*

  The price for renewable power must ***allow for risk return profiles*** *that are competitive with other investment options.*

  The ***duration*** *of a project must* ***allow investors to recover*** *their investment.*

  - **Appropriate administrative procedures**
  - **Fair grid access and strategic grid planning**
  - **Public acceptance and support**
  - **Focused R&D investment in support of industrial competitiveness**

Complementary Strategies

- **R&D, Feed-In-Tariffs and Tradable RE Certificates** should be considered as **technology development policies:**
  - ✓ **R&D** encourages **new applications**
  - ✓ **Feed InTariffs** support **industry development**
  - ✓ **Tradable RE Certificates support markets** for lowest cost/most mature technologies

- **Certified Emission Reductions monetise environmental externalities**

R&D issues

- **Cost reduction -** basis for further market penetration
- **RD&D play a vital role for present and future renewable technologies** to deliver their potential

- **Governments to consider restoring RD&D budgets.**

- **Industry** expected to play **a major role in RD&D,** particularly for **performance increase** and **cost reduction.**
- **New generation technologies** depend on **Government RD&D.**

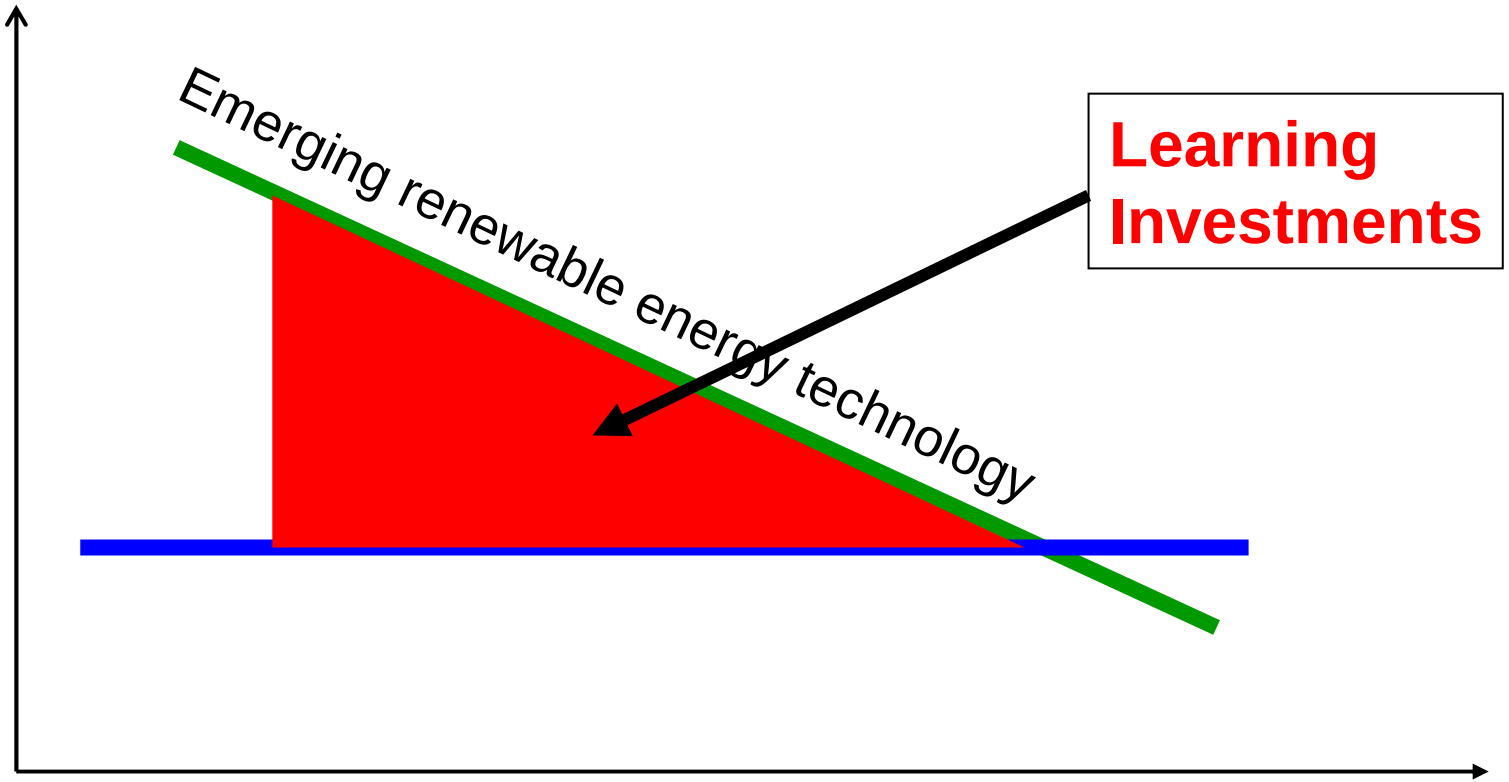
- **Government RD&D** to address **public acceptability, grid connection, intermittency.**
- **Governments** to consider **transfer and share** with **developing countries.**

Technology learning curve

R&D = learning by searching

Improving manufacture process= learning by doing

Feedback by applications = learning by using



Source: C.O. Wene, IEA

Policy Options to Optimise RE Markets

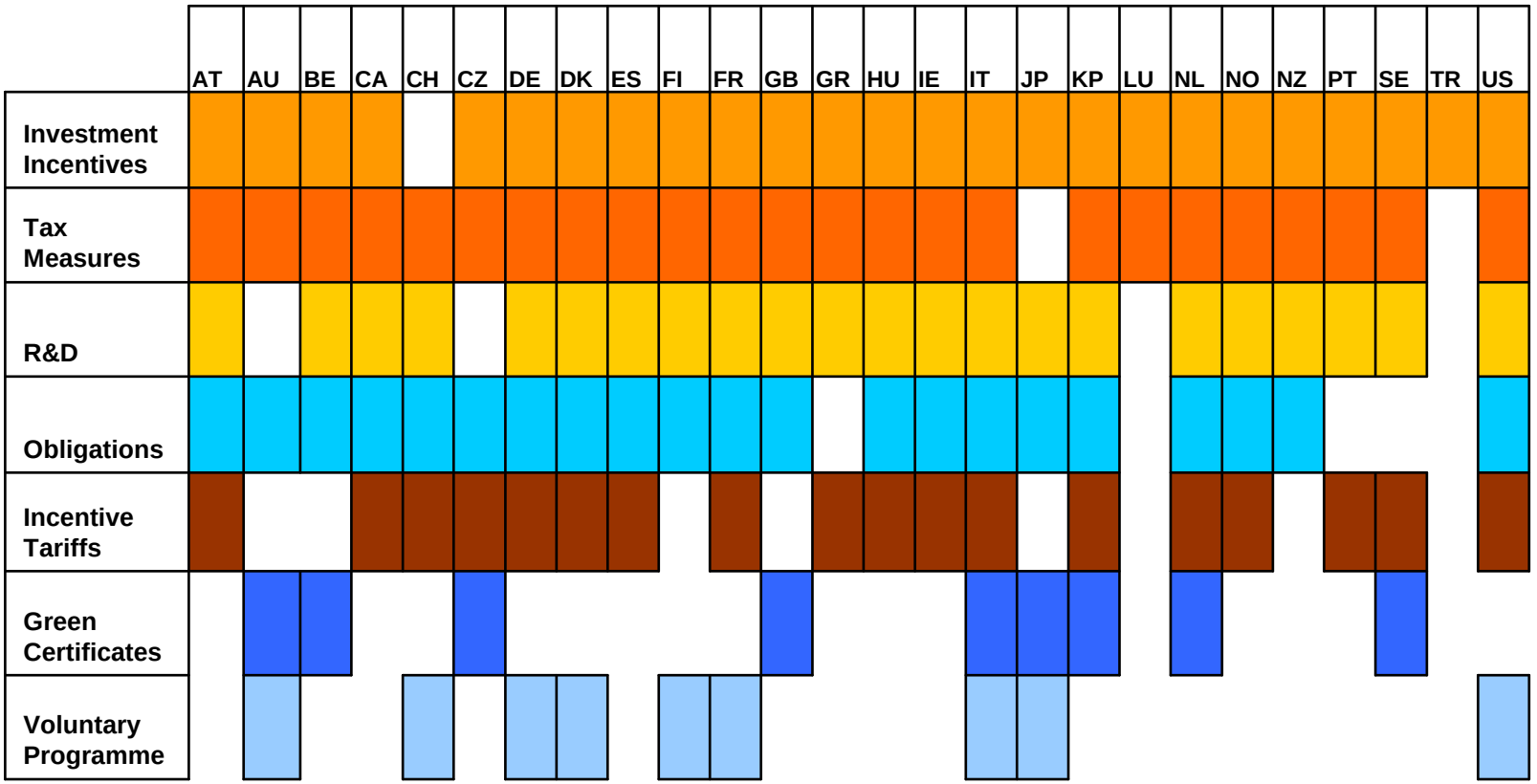
Short-term investments to reduce costs

- ✓ demand stimulation by tariffs, portfolio quotas, national targets
- ✓ elimination of burdensome policies (siting, permits, licensing, etc.)
- ✓ continued R&D
- ✓ International Financial Institution support of non OECD market development

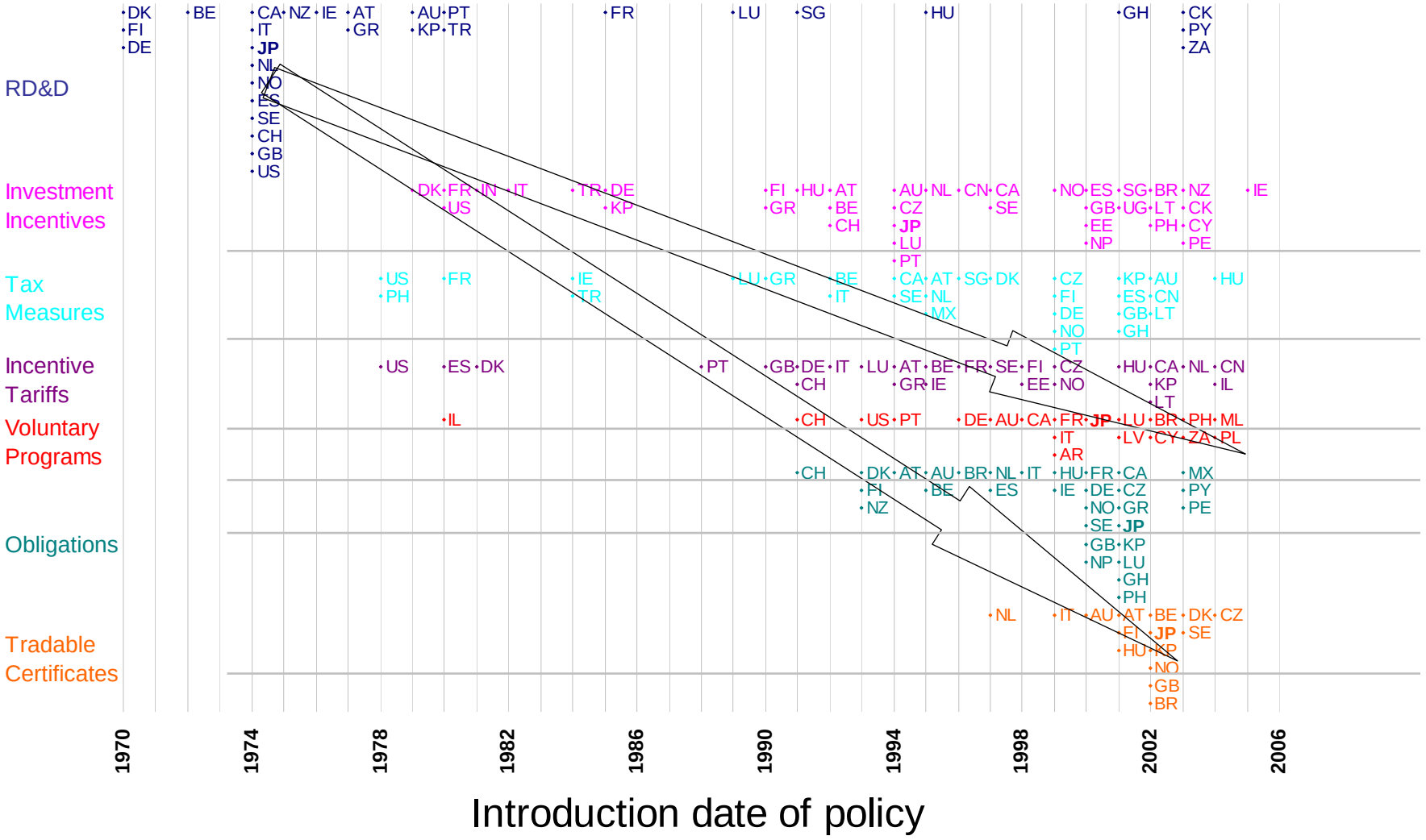
Long-term market competitiveness rules

- ✓ **valuation** of security, diversity and environmental **benefits**
- ✓ **elimination of subsidies** to conventional energies
- ✓ **tradable renewable energy certificates**
- ✓ **certified emission reductions** with targets and penalties
- ✓ integration of **distributed generation** in energy market liberalisation rules

Current Geographic Distribution of Policies



RES Policy Chronology



Policy messages-1

- **Current policies will not bring us on a path towards a sustainable energy future** A more sustainable energy future is possible with a **portfolio of clean and efficient technologies with renewables** centralized and distributed and at village power level.

- **It will take a major coordinated, international effort to achieve the results implied : unprecedented co-operation between the developed and emerging economies, and between industry and government will be needed.**

- **The task will take decades to complete and it will require significant investments costs. But also Business as usual would cost a lot!**

- **The task is urgent:** to ensure that the energy sector remains on a sustainable path in the future **it must be carried out before a new generation of inefficient and high-carbon energy infrastructure is locked into place.**

Policy messages-2

- Implementing the ACT Scenarios will require a transformation in:
  - ✓ the way power is generated,
  - ✓ the way homes, offices and factories are built and used,
  - ✓ the technologies used for transport.

- In the end, it is the private sector that will have to deliver the changes required. But the market on its own will not always achieve the desired results.

- Governments have a major role to play in supporting innovative R&D and in helping new technologies to surmount some daunting barriers: this will happen only with credible, consistent and long term policy intervention

IEA Renewable Energy Publications

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