



Lessons from Liberalised Electricity Markets

Noé van Hulst

Director, Long-Term Co-operation and Policy Analysis

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Outline

- **Policy objectives**
- **Experiences with liberalised markets**
- **Critical factors in successful reform**
- **Are expectations met?**



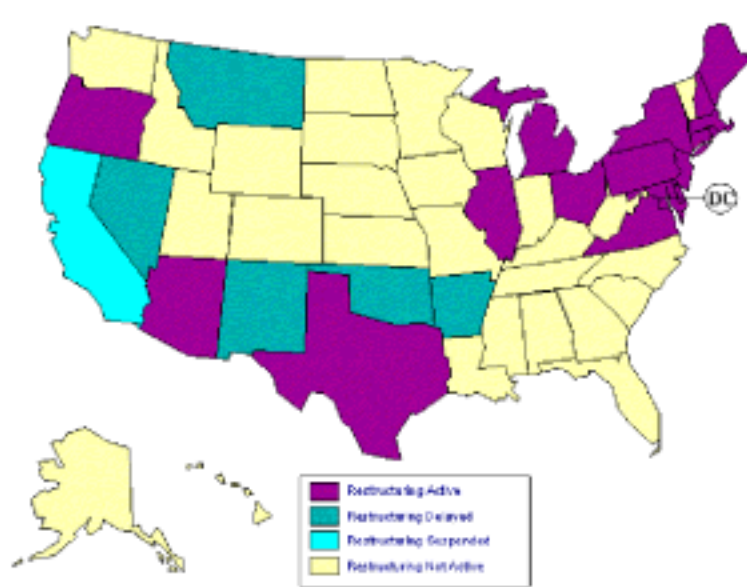
Policy Objectives in Liberalisation

- Lower costs from higher efficiency
- Freedom of choice
- Cost reflective prices
- High efficiency without jeopardising:
 - ◆ Reliability
 - ◆ Environment



North America: Slow but steady evolution

Status of Restructuring



Source: US Department of Energy, February 2003

Electricity markets



Source: Energy Information Administration & Professor Paul Joskow



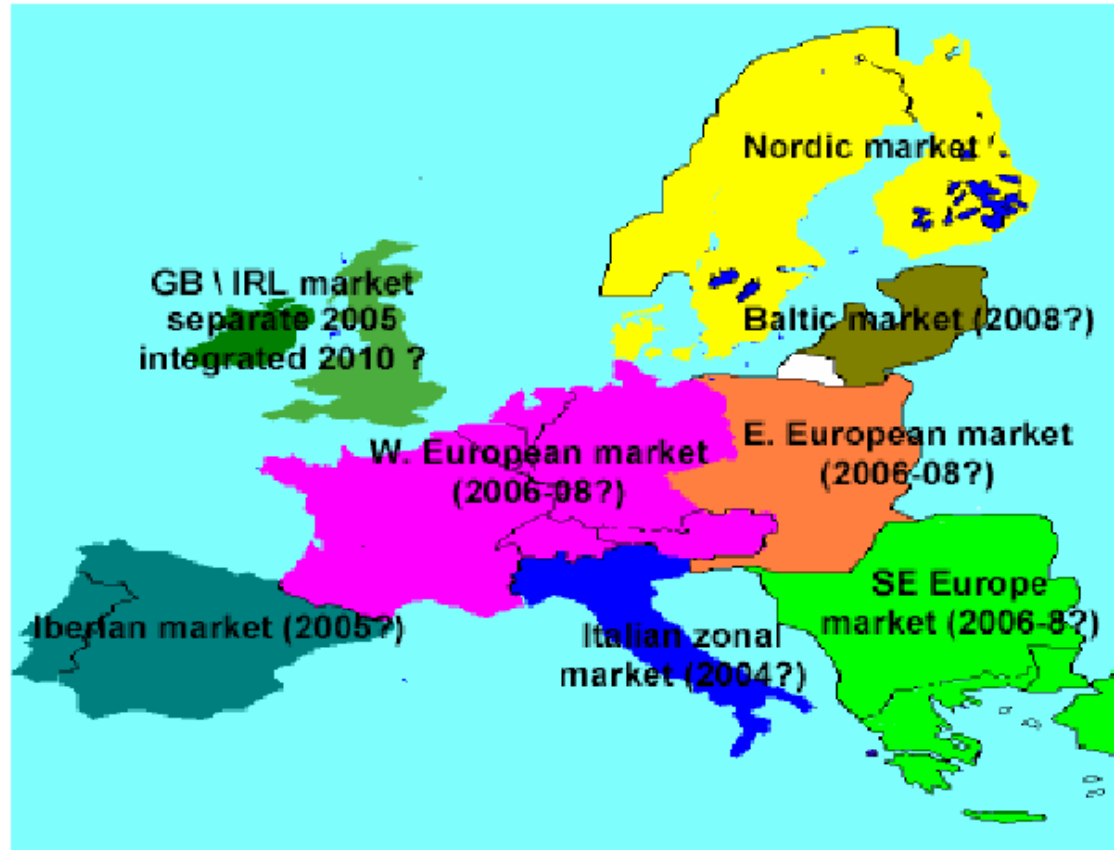
EU Directives Commit Member Countries to Liberalisation

EU commission predicts regional markets

Level of development of competition	Electricity
not functioning	GR, EE, LV
initial steps only	BE(f) ¹ , LU, LT, PT, PL, CZ, SI, SK
some progress	ES, BE(n), IR, IT, FR, HU, RO
well developed	DK, AT, DE, NL
complete	UK, SE, FI, NO,

¹ BE(f) – francophone Belgium (Brussels and Wallonia), BE(n) – Flanders

Source: EU Commission

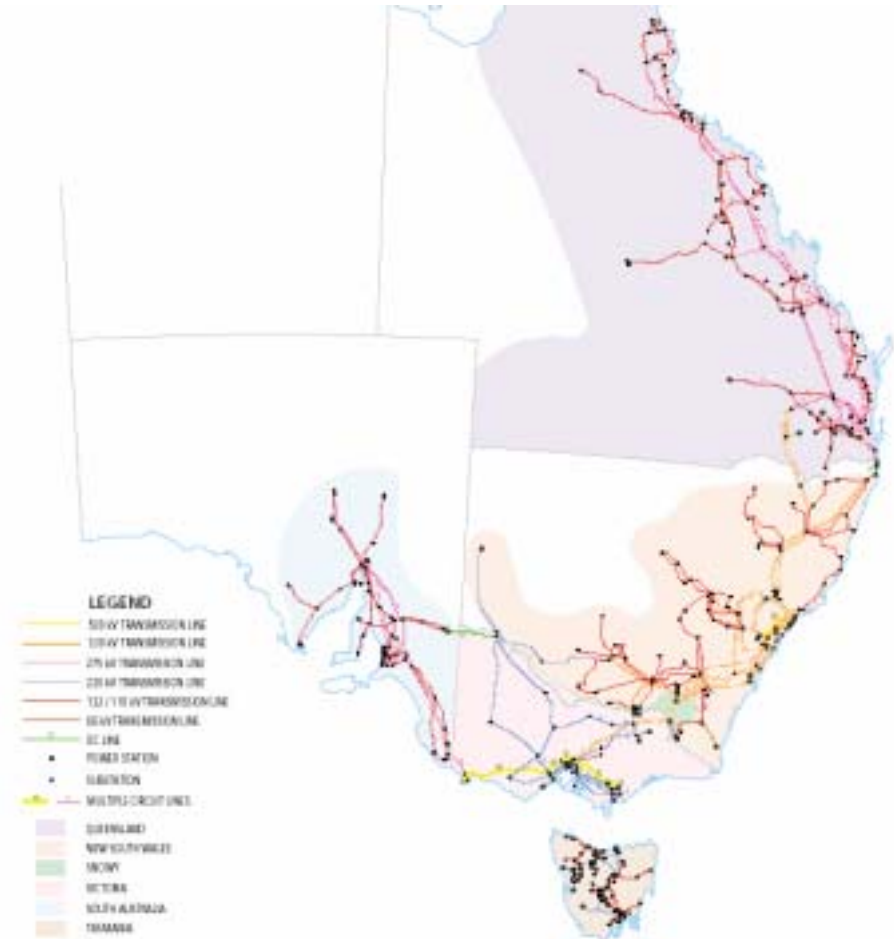


Source: EU Commission



Australia and New Zealand Have Well Developed Markets

National Electricity Market





All IEA Member Countries are on the Path of Liberalisation

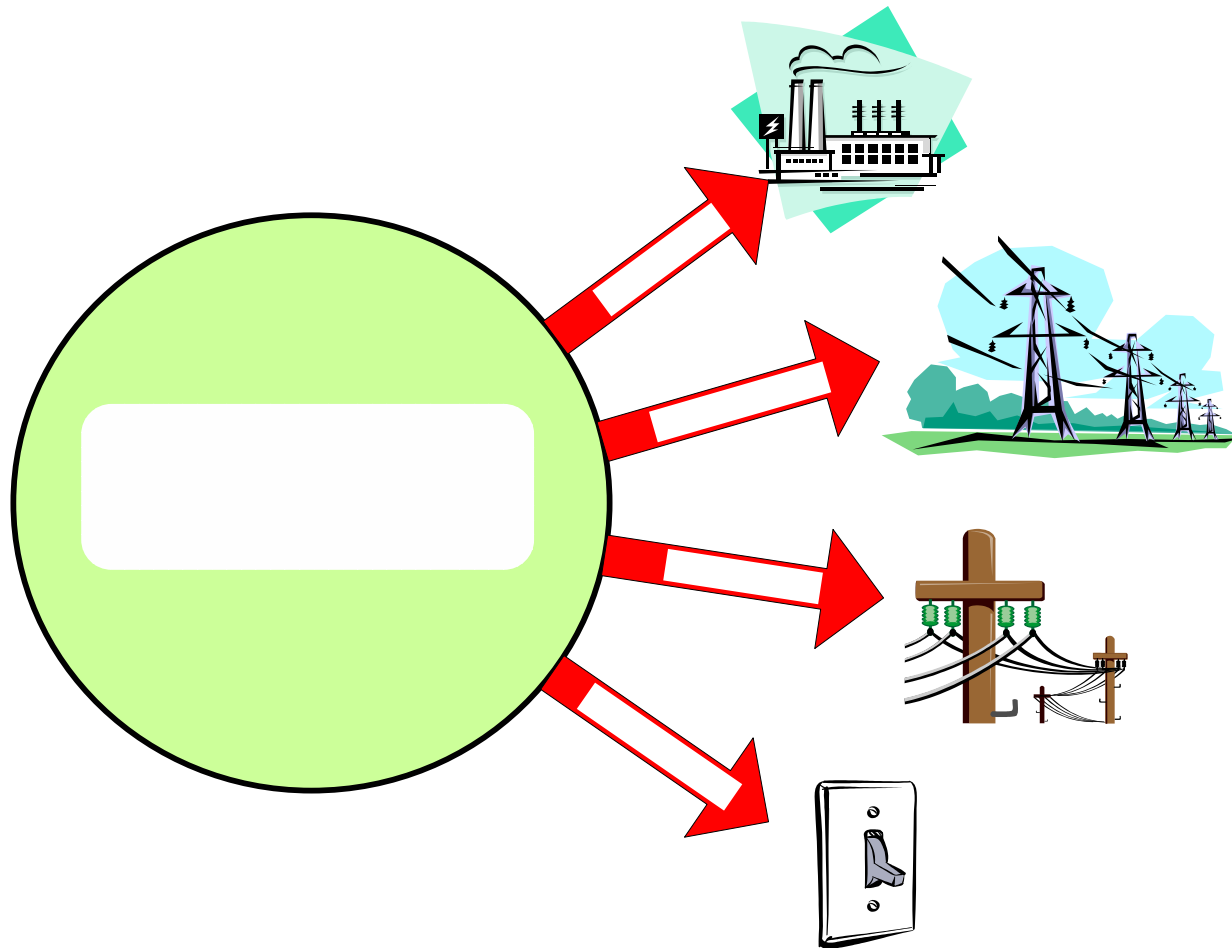
- Different stages of development
- The direction is clear 
- Not experienced full business cycle yet



Legal and Regulatory Framework

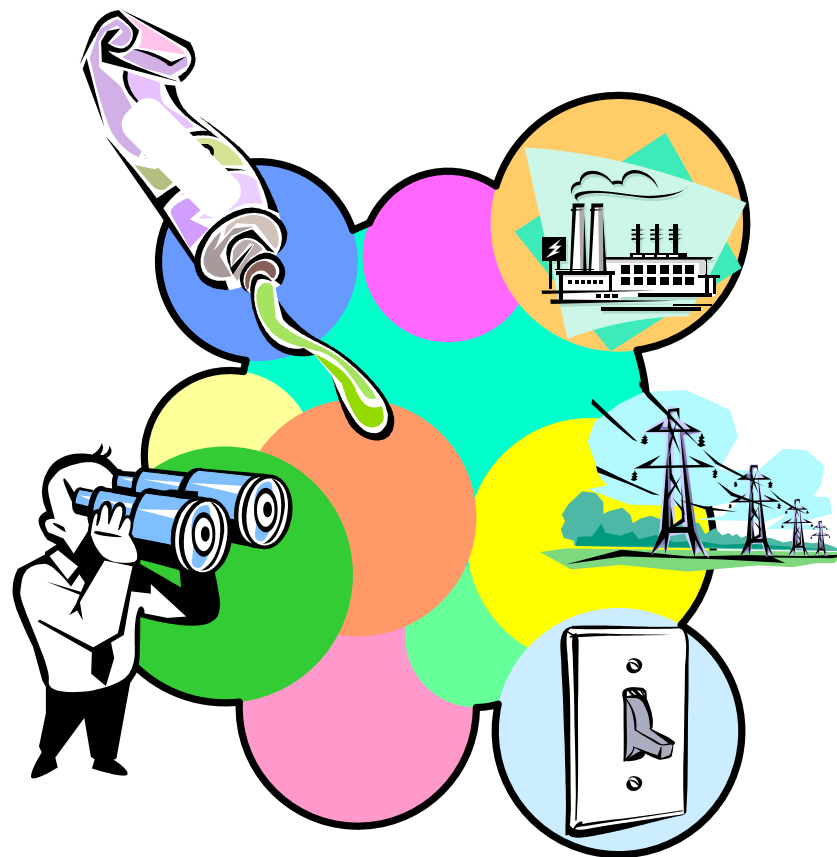
- **Effective unbundling**
- **Independent Transmission System Operator**
- **Strong independent regulator**
- **Non-discriminatory access to wires**

Unbundling is Key



Effective Markets are Required to Make it Work

- Relevant markets are needed
- Prices are the glue
- Transparency is key



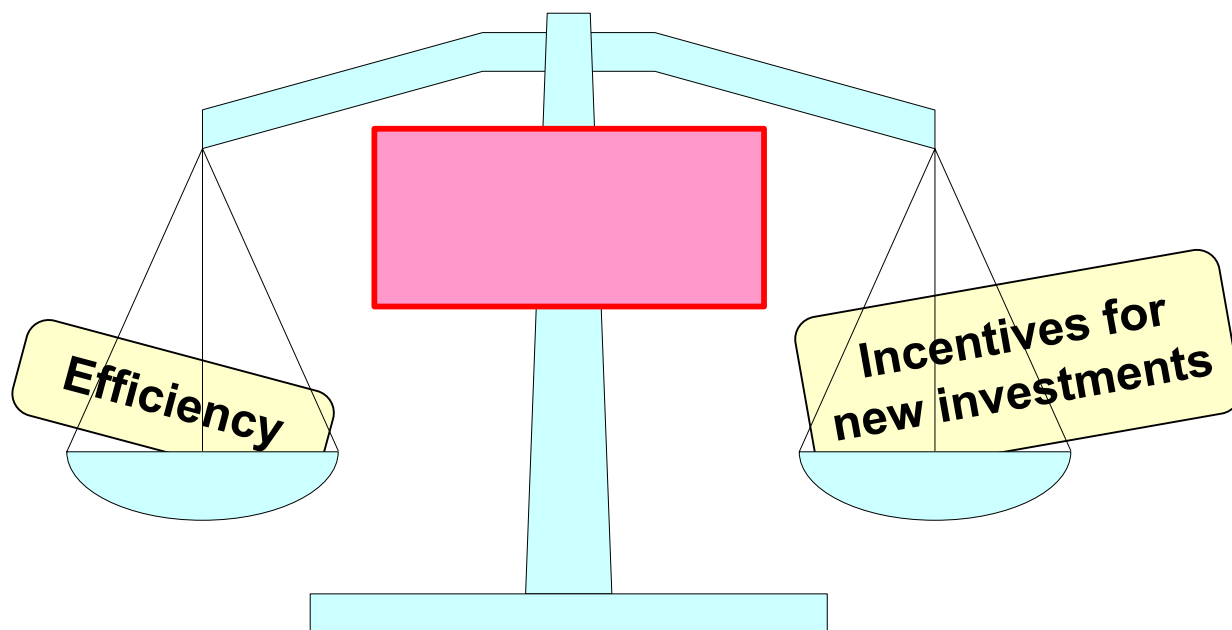


Regulators and Policy Makers have Important Roles

- Clear market design
 - Regulated tariffs in natural monopolies
 - Management of incumbents' market power
- ⇒ BUT let market set prices in competitive domain
- ⇒ Electricity is volatile, so are prices



Do Markets Give Efficient Incentives For Investment?





Markets Can Deliver Signals to Investment

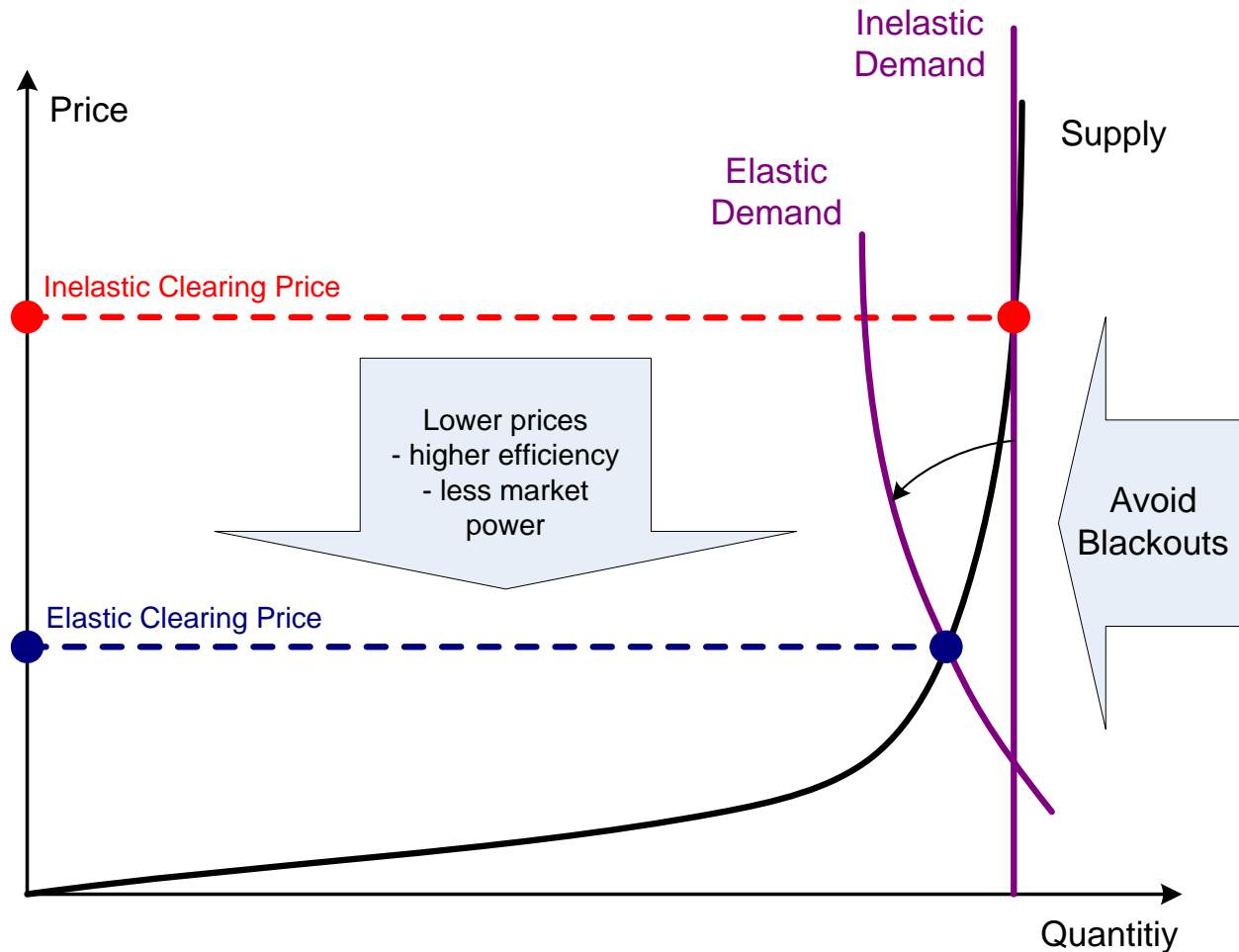
- **Markets with energy only**
 - ◆ Trend in Europe & Australia
- **Markets with capacity measures and price cap**
 - ◆ Trend in North America

⇒ **So far energy only markets are OK**

⇒ **Demand Response is important**



Demand Response Makes Markets Work Better



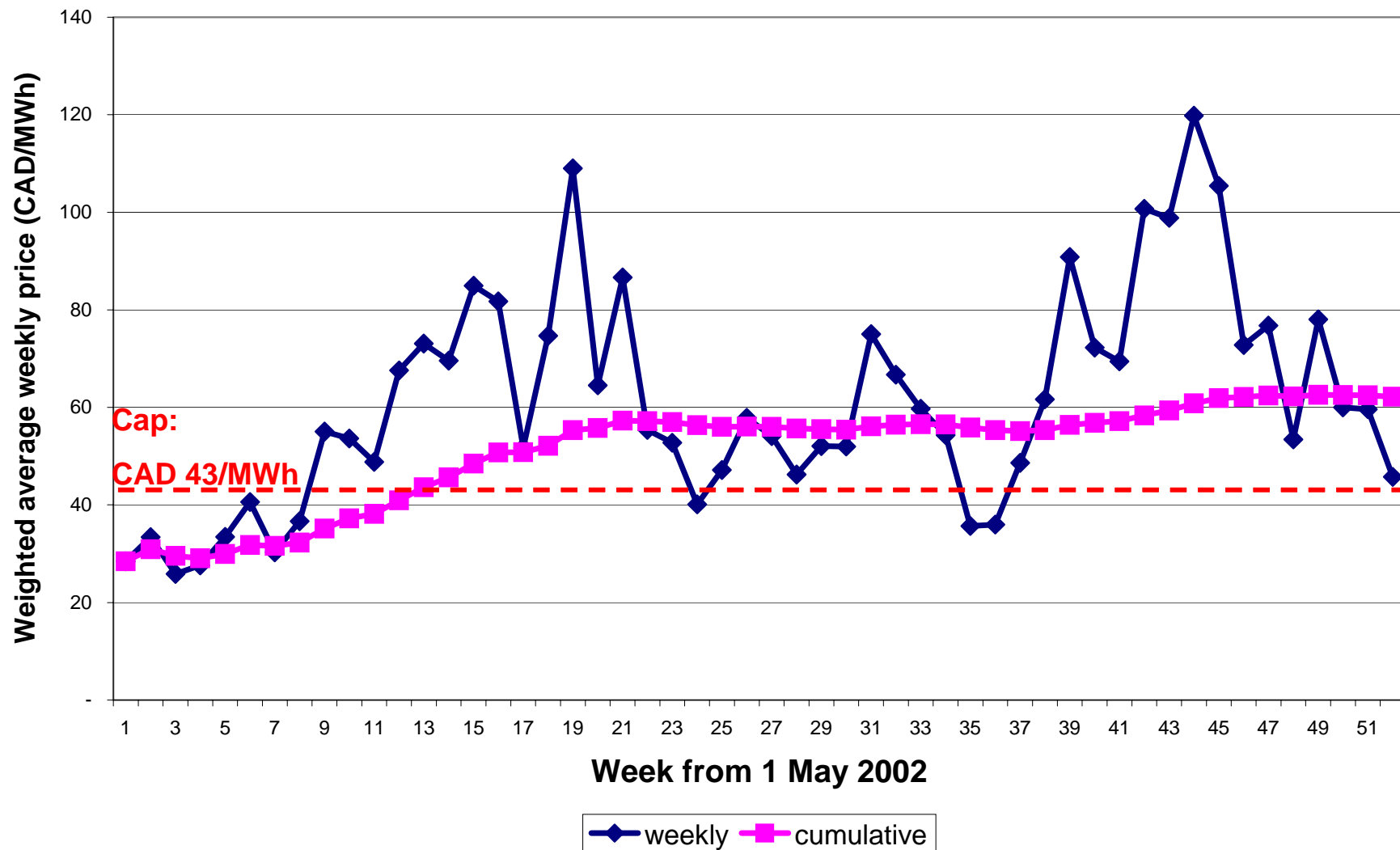


Ontario Market

- **Government opened market to all consumers in May 2002**
- **Tight market + hot summer = wholesale price rises 30%**
- **Nov 2002: Government capped retail prices below cost until 2006 for about 50% of the market**
- **Consumers effectively “borrowing” to pay for their current consumption**



Ontario Prices Well Above Cap Level



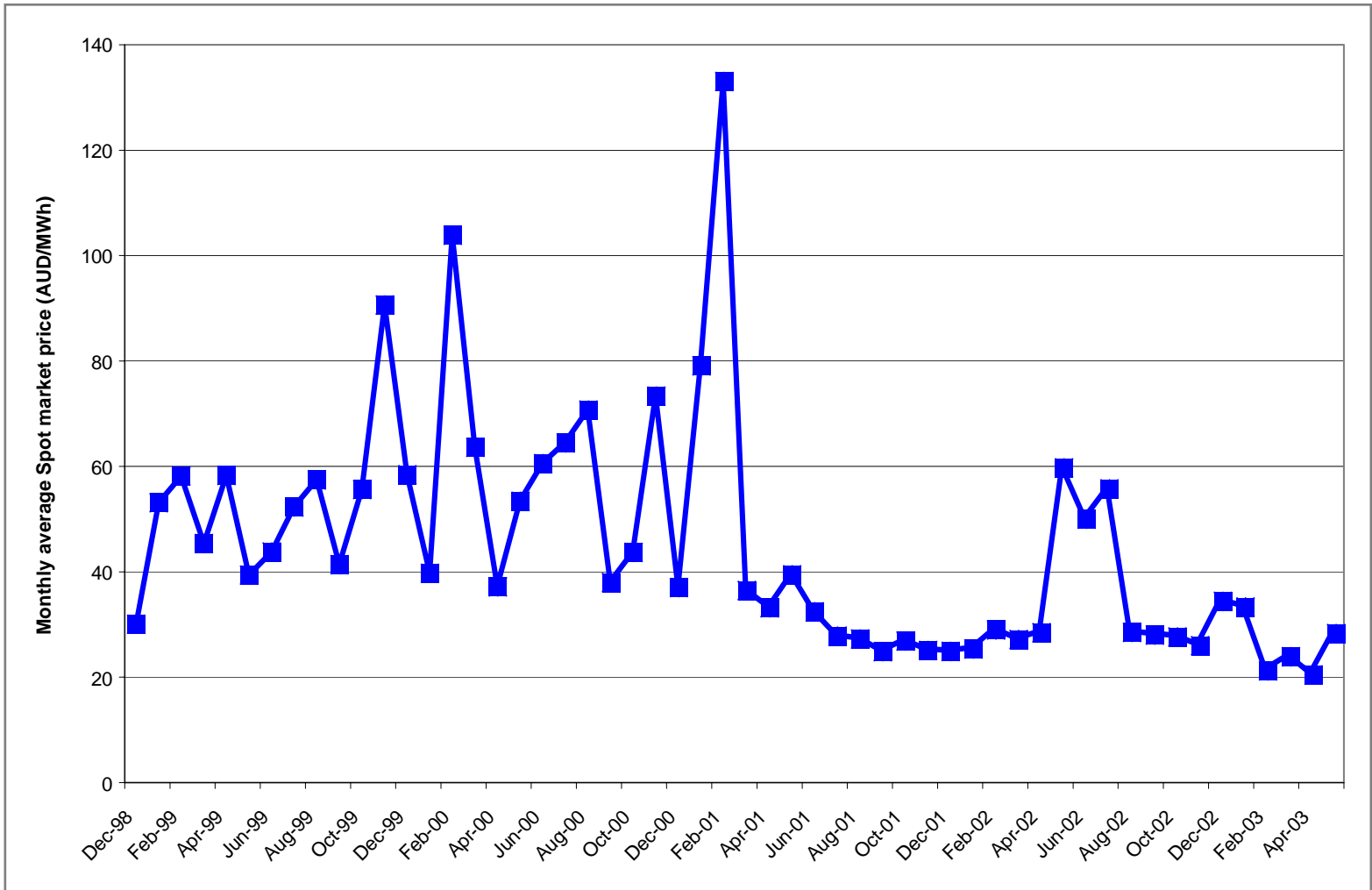


Consequences

- **Government is caught in a trap**
 - ◆ **Government “temporarily” intervenes to subsidise retail prices well below entry price for new generation**
↓
 - ◆ **Higher demand and discouraged investment (political risk)**
↓
 - ◆ **Even higher wholesale prices**
↓
 - ◆ **Higher government subsidies and blackout risks**
↓
 - ◆ **Direct investment by government in new capacity**
 - ◆ **Government trapped itself into paying for higher prices and new supply!**

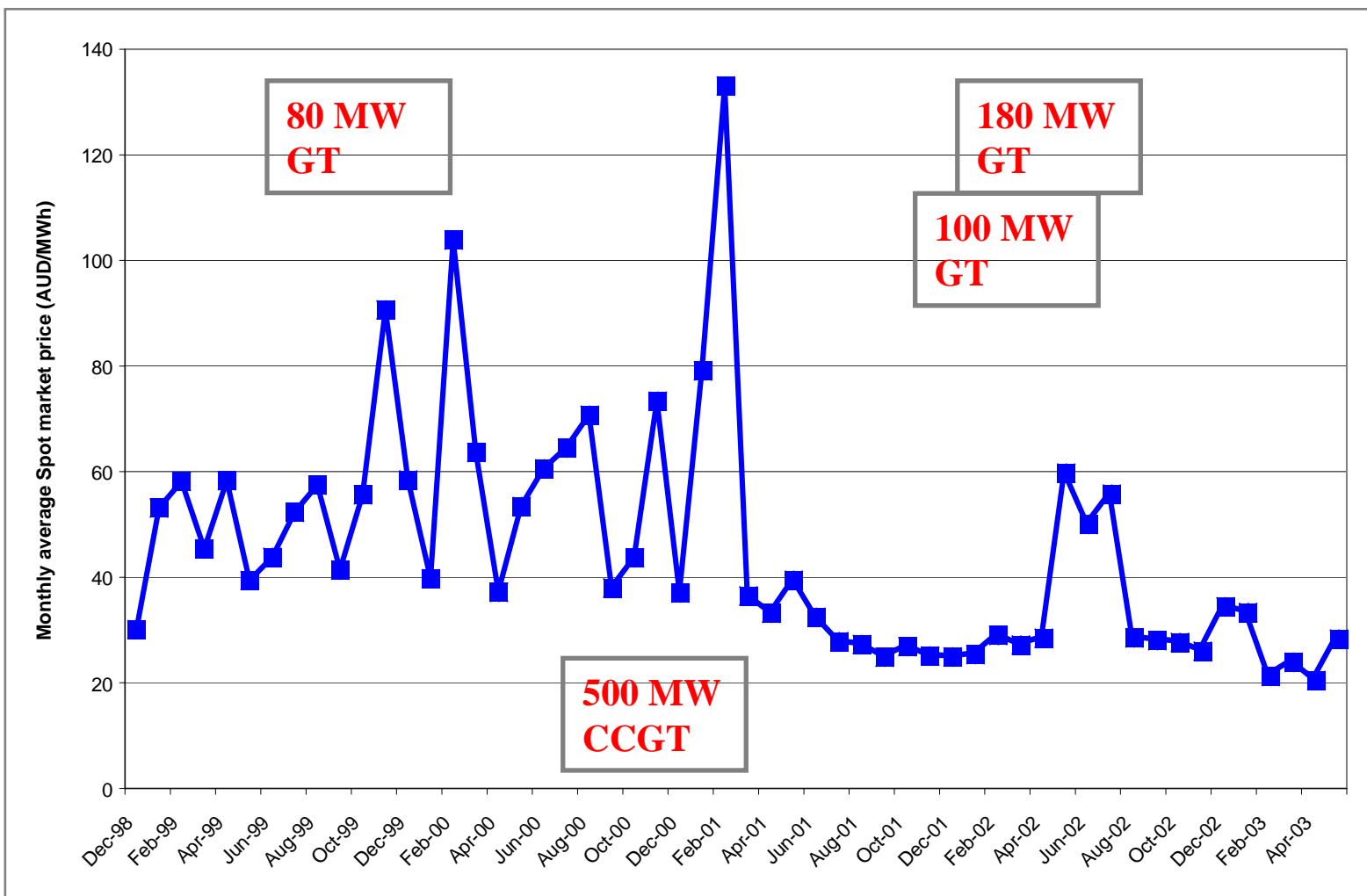


South Australia – High Prices When Market Opened





Led to 30% Capacity Increase





Are Consumers at Risk?

- Reliability
 - Price volatility
 - Supplier of last resort
- ⇒ Freedom of choice and instruments to handle it is necessary and viable

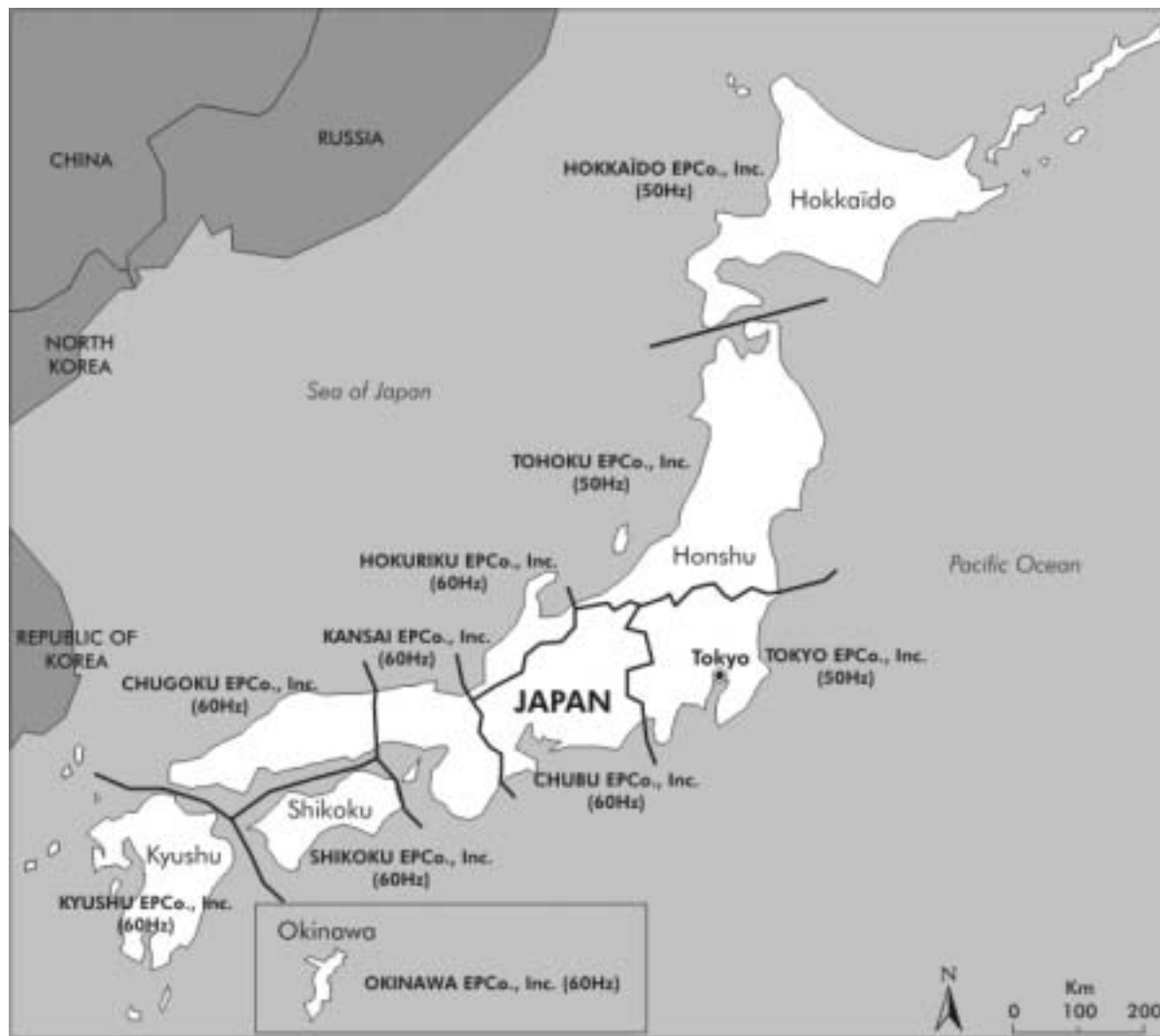


Competitive Markets Can Deliver Real Benefits

- **Benefits from competition**
 - ⇒ Higher efficiency
- **Benefits from trade**
- **Benefits from freedom to choose**

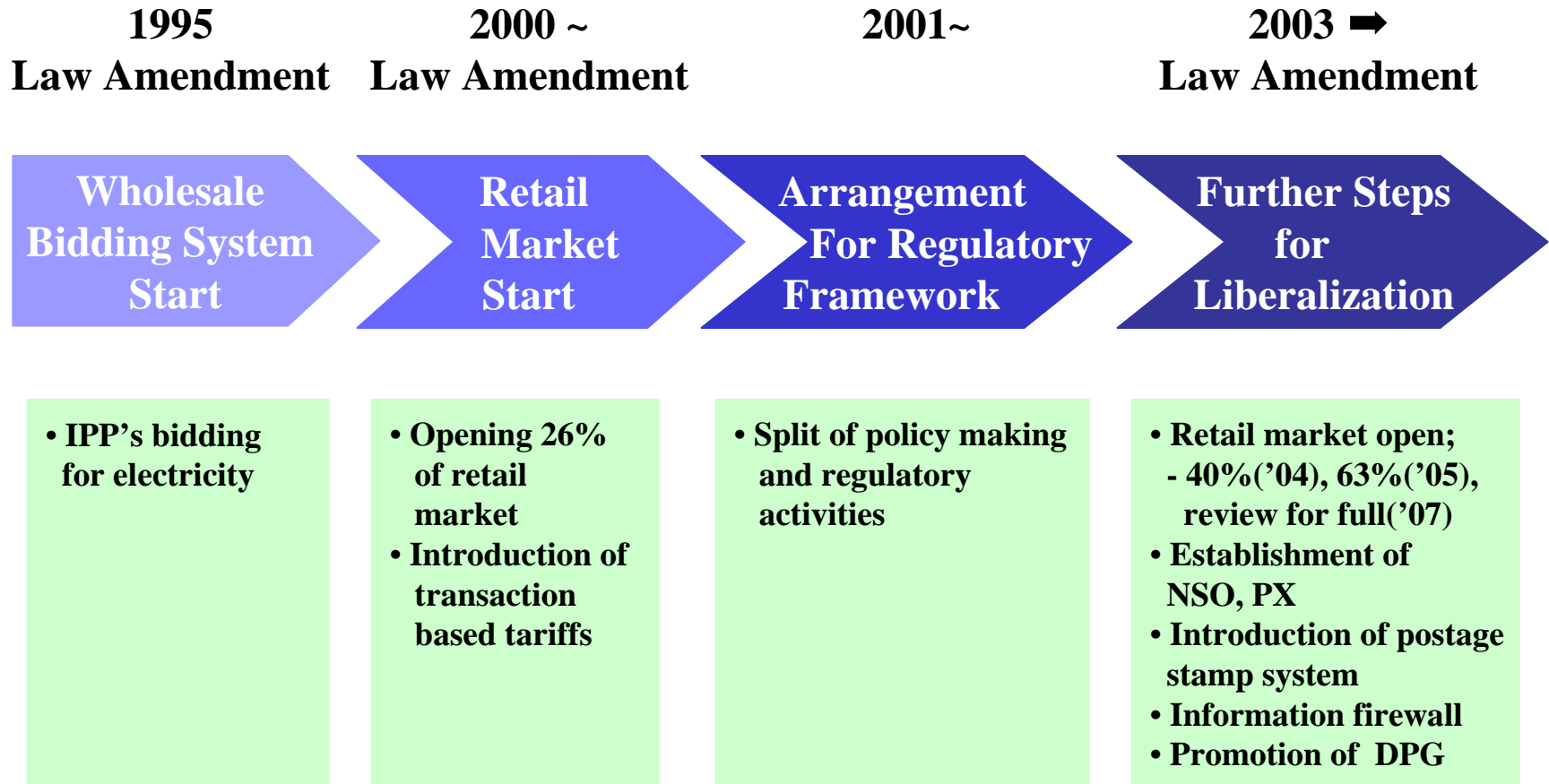


Japan





Reform Path in Japan





IEA Recommendations in Latest Country Review of Japan

- **Promote pricing mechanisms**
- **Effective unbundling to ensure fair and effective competition**
- **Strengthen the regulatory framework**
- **Foster cost effective strengthening of inter-regional transmission grid**
 - ◆ **Particularly between the two frequency areas**



Key Messages

- **Markets work with the appropriate legal and regulatory framework → Important role for government!**
 - ◆ **Institutional set-up is critical**
 - ◆ **Effective unbundling is required**
- **Incentives matter!**
- **Markets do deliver long term benefits**