



CEEM Specialised Training Program

El Restructuring in Australia

El governance and regulation

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Issues in governance

- Shared nature of the electricity industry:
 - Network services not readily separable from generation or demand-side services
 - Integrated nature of the National Electricity Grid
 - Mix of competitive & cooperative decision making
- Need for consistency & coherence:
 - Federation government structure in Australia:
 - Differing priorities at federal & state levels
 - COAG-based governance structure?

Traditional approach to infrastructure

- Regarded as natural monopolies & run by:
 - State-owned enterprises (eg Australia, UK)
 - Private monopolies (eg some in USA)
- In either case, once industry had matured:
 - Often exhibited poor productivity, low rates of return, over-staffing or large calls on public funds
 - Often proved difficult to regulate due to asymmetry of information & inappropriate incentives
 - Often slow to innovate

A US perspective on regulatory options for the electricity industry:

(“Regulating Regional Power Systems”, CJ Andrews (Ed), 1995, p87)

	Traditional regulation	Integrated resource planning	Markets & incentives
Advantages	<ul style="list-style-type: none">• Well-understood with predictable outcomes	<ul style="list-style-type: none">• Increased public participation, better social & environmental outcomes	<ul style="list-style-type: none">• Can reduce cost & support innovation• May have lower regulatory cost
Dis-advantages	<ul style="list-style-type: none">• Poor incentives to minimise cost• Ignores externalities• Hazards of ex-post evaluation	<ul style="list-style-type: none">• Cumbersome• Poor incentives to minimise cost• Subjective values• Incompatible with markets?	<ul style="list-style-type: none">• Unproven model subject to gaming• Uncertain outcomes• Worse social & environmental outcomes?

Issues & choices in regulation

- Desirable characteristics for regulation:
 - Independent, unbiased, knowledgeable, consistent, accountable
 - Incorporate externalities
 - Support competitive processes, not act as a central planner:
 - Monitor, advise, reward, threaten rather than directly intervene
 - *Align participant & social interests:*
 - *Incentives preferable to penalties*

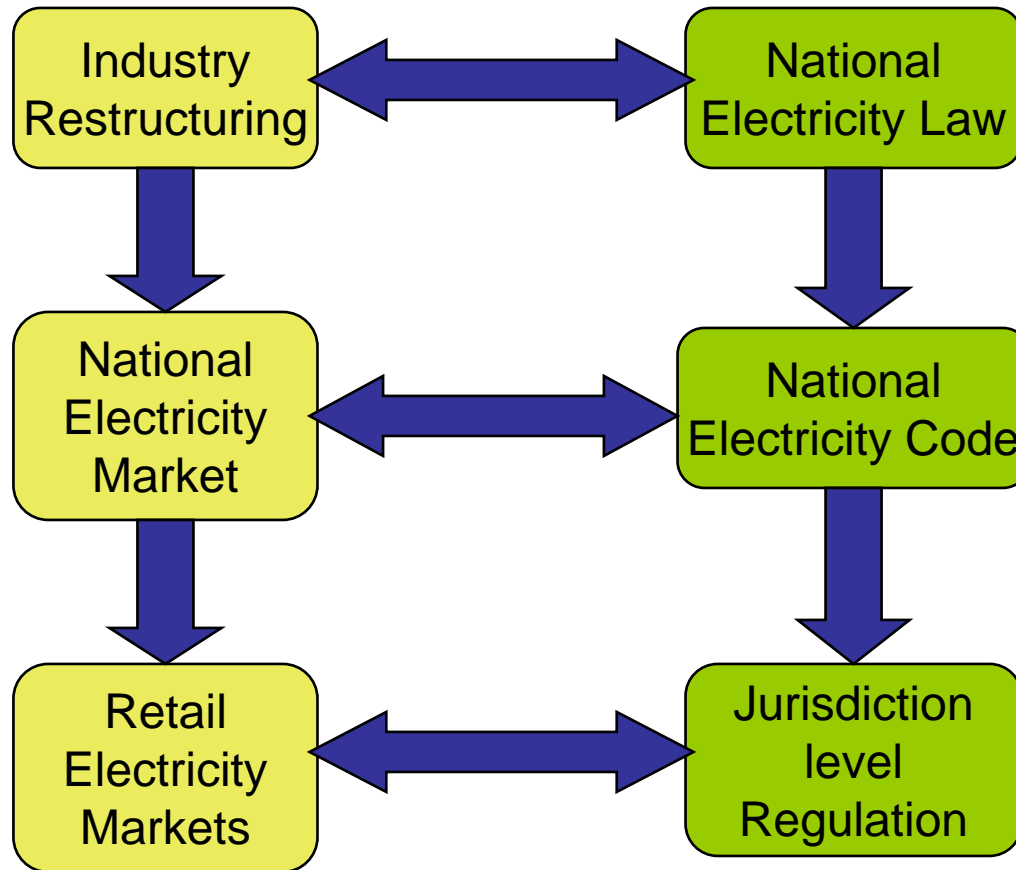
Choices in regulatory arrangements

- Industry-specific or generic?
 - Industry-specific more knowledgeable, but:
 - More likely to suffer ‘regulatory capture’
 - More likely to engage in heavy-handed intervention
- Narrow or broad regulatory objectives?
 - Narrow focus on financial regulation:
 - Simpler to implement, but ignores important issues
 - Achieving other regulatory objectives:
 - ‘Monetarise’ (e.g. taxes or tradeable permits)
 - Licence regime (e.g. customer service, QOS)

Choices in regulatory arrangements

- Single regulatory body or multiple bodies sharing regulatory responsibility?
 - Shared responsibility:
 - promotes innovation & robustness
 - requires good communication & cooperation
- Single regulator or multi-member tribunal?
 - Tribunal members must negotiate but share responsibility
- External regulation or self-regulation?
 - Self-regulation can be more flexible & subtle if all stakeholders are adequately represented

Australian electricity reform process



National Electricity Law (NEL)

- Supports the operation of the NEC and NEM:
 - Creates NECA & NEMMCO
 - Only NEMMCO may operate a wholesale market
 - Generators & Network service providers must register with NEMMCO
 - Retailers & customers may only purchase wholesale from NEMMCO
- Passed by participating jurisdictions:
 - Proclaimed December 1998
 - Changes require jurisdictions' unanimous approval

National Electricity Code (NEC)

- Defines National Electricity Market (NEM):
 - Terms of participation
 - Rules for market operation
 - Security arrangements
 - Network regulation and access arrangements:
 - Network pricing, metering, connection requirements
 - Code administration & enforcement
 - Dispute resolution, rule change, derogations

Jurisdiction-level laws & regulation

- Determine retail market arrangements:
 - Determine customer eligibility for wholesale market access and retail contestability:
 - Set retail prices for franchise customers
 - Distribution network access regime:
 - To the extent derogated from NEC
 - Issue distribution and retail licences:
 - Regulatory requirements in licence conditions:
 - e.g. reliability of supply, customer service
 - Enforce safety and environmental standards
 - Penalties rather than incentives

Federal regulatory bodies

- Australian Competition and Consumer Commission (ACCC):
 - May authorise the NEC & proposed changes
 - Regulates network access regime:
 - In conjunction with state bodies & unless derogated
 - Supervises market conduct through the TPA:
 - Abuse of market power & product quality
- Australian Securities & Investments Commission (ASIC):
 - May make an exempt futures market declaration

Regulatory bodies set up by NEL

- National Electricity Code Administrator Ltd:
 - Owned by the participating jurisdictions
 - Responsible for:
 - Monitoring Code compliance
 - Reporting breaches of the Code
 - Managing changes to the Code
 - Providing dispute resolution procedures
- National Electricity Market Management Co:
 - Owned by the participating jurisdictions
 - Implements much of the NEC

Other bodies set up by NEL, NEC

- NEL: National Electricity Tribunal (NET):
 - Review any decisions by NEMMCO & NECA that are identified in the Code as reviewable
 - Hear applications alleging Code breaches
- NEC: Reliability Panel (RP):
 - Monitor, review & report on reliability in NEM
 - Determine reserve plant margins
 - Determine guidelines for NEMMCO's power to intervene in NEM for reliability reasons
- NEC: Code Change Panel (CCP):
 - Recommend changes to the NEC

Legal & regulatory basis for restructured EI

Trade Practices Act & other federal legislation

National Electricity Code

National Electricity Market
Design & Regulation

Jurisdiction-specific laws

Retail Electricity Market
Design & Regulation

Network Technical Regulation

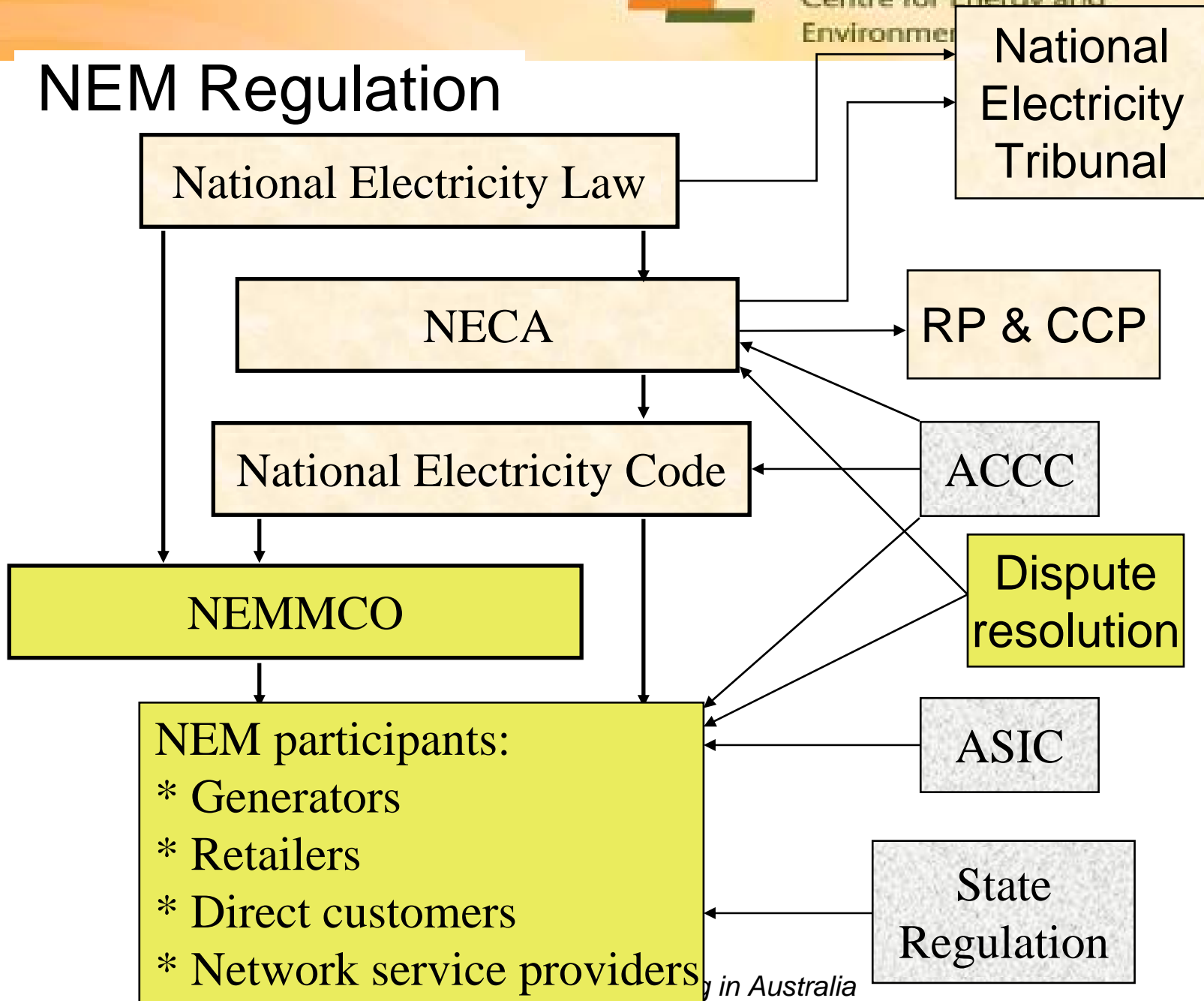
Network
Economic Regulation

Supply Authority
Restructuring

Environmental
externalities



NEM Regulation



State governments + the NEM

Overview of Political/Regulatory Organisations Interested in the Electricity Market

Australian Competition & Consumer Commission	National Competition Council	Council of Australian Government	National Standards Commission
<p>South Australia</p> <ul style="list-style-type: none"> SA State Treasury Office of Technical South Australian Independent Industry Regulator 	<p>Victoria</p> <ul style="list-style-type: none"> Vic State Treasury Essential Services Commission 	<p>New South Wales</p> <ul style="list-style-type: none"> NSW State Treasury Independent Pricing & Regulatory Tribunal Ministry of Energy & Utilities 	<p>Australia Capital Territory</p> <ul style="list-style-type: none"> Independent Competition & Regulatory Commission Department of Urban Services
			<p>Queensland</p> <ul style="list-style-type: none"> Qld State Treasury Qld Competition

Different governments will have different interests depending on whether they:-

<ul style="list-style-type: none"> View energy as a state investment differentiator or not Have committed to FRC or not Want to invest in the industry themselves or not 	<ul style="list-style-type: none"> Own or have sold assets Have an over or under supply of generation or transmission capacity
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Independent Pricing and Regulatory Tribunal of NSW (IPART)

- IPART regulates:
 - Distribution wires charges under NEC rules
 - Retail prices for franchise customers
 - Distributor & retailer licence regime (from 2000)
- Required to consider:
 - consumer protection, economic efficiency, financial stability, environmental and other standards
- Uses incentives, benchmarking & negotiation

Other NSW regulatory bodies

- Dept of Energy, Utilities & Sustainability:
 - Administers residual aspects of licence regime:
 - Network security & safety
- Energy & Water Industry Ombudsman NSW (EWION):
 - Investigates customer complaints

NSW regulatory framework

EWION

Electricity Supply Act of NSW

IPART & ACCC:

- * Economic regulation of distributors
- * Revenue cap, benchmarking, negotiation
- * Required to consider social & other factors

Retail market participants
(self regulation via codes):

- * Retailers, Distributors
- * Final customers
- * Distributed resources

Licence regime, IPART/DEUS:

- * Retailers (including GH red'n targets)
- * Distributors (including QOS, LCP)

NSW Minister for Energy

estru

Concerns about joint distributor/retailers

(eg: ACCC FRC Determination, 2001; IPART Ring Fencing Guidelines, 2003; Metrology Review, 2003)

- Potential barriers to entry:
 - Discriminatory charges or requirements
 - Network data, metering & control equipment
 - Ownership of customer data, customer inertia
 - Economies of scale & cross-subsidies
- Ring-fencing options for distribution & retail:
 - Legal, accounting or operations separation:
 - Legal separation clearly the strongest requirement
- Metrology issues paper 2003:
 - Meters to be owned by the distributor?

Energy Industry Ombudsman Schemes

- Similar arrangements in most states:
 - Funded by electricity distributor/retailers
- Deal with consumer complaints:
 - mainly residential, some commercial & industrial
- Most frequent categories of issues raised:
 - Billing
 - Customer service
 - Provision of supply

Processes for self-regulation

- National electricity market:
 - NEMMCO and NECA both have committees involving market participants:
 - Contribute to market operation & enhancement:
 - Changes in the NEM code
 - Projections of system adequacy, network planning
 - NECA implements & oversees dispute resolution procedures

Processes for self-regulation

- Retail markets:
 - The states have established industry working groups to develop codes of practice in important areas, e.g:
 - Quality of supply standards, customer services
- Arbitration & appeal mechanisms at state & federal levels:
 - To ACCC or state regulatory bodies

Ownership in the NEM – public/private

State And Private Asset Ownership In The National Electricity Market

	Energy Providers	Generators	Transmission	Distribution	Retail	
% State owned	Few	70%	70%	70%	60%	} State Owned Enterprises = \$31b (69%)
Value of Assets		\$7b	\$4b	\$18.2b	\$1.8b	
% Private Owned	Most	30%	30%	30%	40%	} Private = \$14b (31%)
Value of Assets		\$3b	\$2b	\$7.8	\$1.2b	

Electricity industry ownership issues

- Some concerns about private ownership:
 - Market power abuse, particularly of small end users
 - Foreign domination of a key sector of the economy
 - Vertical & horizontal concentration of ownership
 - Lack of support for innovation, sustainability & workforce development
- Some concerns about public ownership:
 - Focussed on conserving the traditional paradigm
 - Confusion of roles: equity holder vs regulator
 - Not an option for distributed resources

Comparison of ownership options

- It would be a mistake:
 - To retain public ownership merely to protect the status quo
 - To privatise an electricity industry just for the proceeds from asset sales
- In either case require:
 - An effective, independent regulatory regime
 - Protection against concentration of ownership
 - Enhanced demand side participation
 - Measures to improve sustainability & to address equity concerns (“essential good”)