

# Economic Regulation Authority

 WESTERN AUSTRALIA

*Promoting fair prices, quality services and choice.*



# Regulation

Laws 8505 UWA

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**General Manager**  
**Economic Regulation Authority**

**31 March 2008**

# Overview

Economic Regulation Authority

Some Economics

Case Example – Epic Energy WA

# Part 1: The Economic Regulation Authority

## Functions

- Administers Access to Monopoly Infrastructure
- Licenses Service Providers
- Monitors & Regulates Markets
- Inquiries (Referred by Government)

# The Economic Regulation Authority

## Key Features

- Independence
- Transparency
- Consultation

# Key responsibilities

	Electricity	Gas	Water	Rail
<b>Access</b>	✓	✓		✓
<b>Licensing</b>	✓	✓	✓	
<b>Monitoring</b>	✓	✓	✓	✓
<b>Market arrangements</b>	✓	✓		
<b>Inquiries</b>	✓	✓	✓	✓

Regulated Utility	Relevant Legislation
Gas	<ul style="list-style-type: none"> <li>• <i>Energy Coordination Act 1994</i></li> <li>• <i>Gas Pipelines Access (Western Australia) Act 1998</i></li> <li>• <i>Energy Coordination Regulations 2004</i></li> <li>• <i>Energy Coordination (Customer Contracts) Regulations 2004</i></li> <li>• <i>Energy Coordination (Last Resort Supply) Regulations 2005</i></li> <li>• <i>Energy Coordination (Licensing Fees) Regulations 2005</i></li> <li>• <i>Energy Coordination (Retail Market Schemes) Regulations 2004</i></li> <li>• <i>Gas Pipelines Access (Western Australia) Regulations 2000</i></li> <li>• <i>Gas Pipelines Access (Western Australia) (Funding) Regulations 1999</i></li> <li>• <i>Gas Marketing Code of Conduct 2004</i> (to be repealed and replaced in accordance with the Authority's Final Decision of March 2007, refer to the Agency Performance section for further information).</li> </ul>
Electricity	<ul style="list-style-type: none"> <li>• <i>Electricity Industry Act 2004</i></li> <li>• <i>Electricity Industry (Code of Conduct) Regulations 2005</i></li> <li>• <i>Electricity Industry (Customer Contracts) Regulations 2005</i></li> <li>• <i>Electricity Industry (Licence Conditions) Regulations 2005</i></li> <li>• <i>Electricity Industry (Access Code Enforcement) Regulations 2005</i></li> <li>• <i>Electricity Industry (Licensing Fees) Regulations 2005</i></li> <li>• <i>Electricity Industry (Obligation To Connect) Regulations 2005</i></li> <li>• <i>Electricity Industry (Wholesale Electricity Market) Regulations 2004</i></li> <li>• <i>Electricity Industry (Network Quality and Reliability of Supply) Code 2005</i></li> <li>• <i>Code of Conduct (For the Supply of Electricity to Small Use Customers)</i></li> <li>• <i>Electricity Industry Customer Transfer Code 2004</i></li> <li>• <i>Electricity Networks Access Code 2004</i></li> <li>• <i>Electricity Industry Metering Code 2005</i></li> </ul>
Water	<ul style="list-style-type: none"> <li>• <i>Water Services Licensing Act 1995</i></li> <li>• <i>Water Services Coordination Regulations 1996</i></li> </ul>
Rail	<ul style="list-style-type: none"> <li>• <i>Railways (Access) Act 1998</i></li> <li>• <i>Railways (Access) Code 2000</i></li> </ul>

# Objective & Matters to be Taken into Account

- No overriding objective

Key matters which the Authority must have regard to:

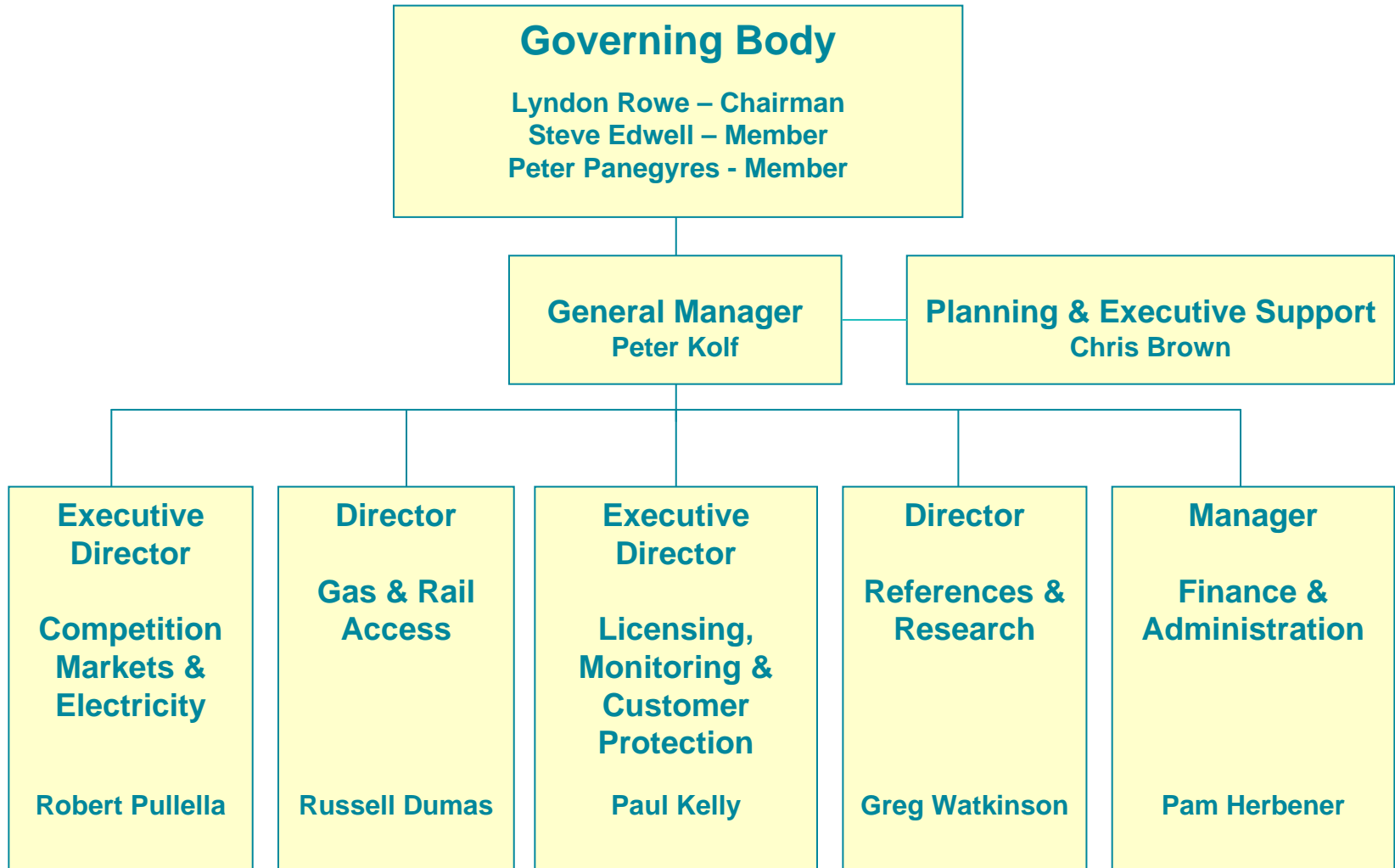
- Promoting outcomes that are in the public interest
- The interests of consumers, investors & service providers
- Encouraging investment in relevant markets
- Promoting competition & fair market conduct
- Preventing abuse of monopoly power
- Promoting transparency and public consultation



# New National Gas Law

The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the **long term interests of consumers** of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

# Economic Regulation Authority



# Completed Inquiries - Mostly in the Water Industry

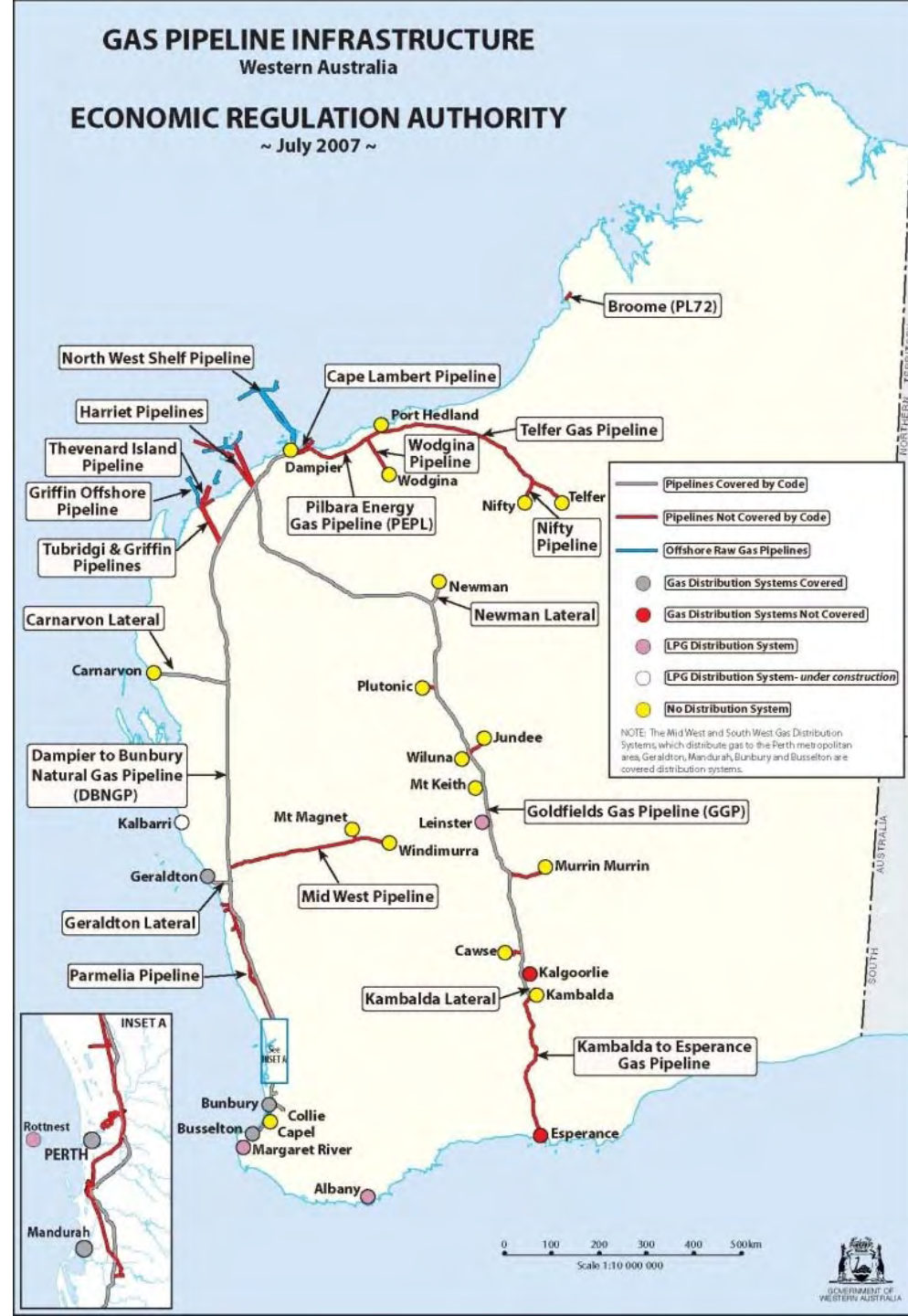
1. Annual Inquiry into the Bunbury and Busselton Water Boards' Tariffs Feb 2008
2. Annual Inquiry on the Water Corporation's Tariffs Jan 2008
3. School Bus Operators' Charter Bus Operations Jul 2007
4. Annual Urban Water & Wastewater Pricing May 2007
5. Harvey Bulk Water Pricing May 2007
6. Country Water & Wastewater Pricing July 2006
7. Esperance – Kalgoorlie Bulk Water Supply Nov 2005
8. Urban Water & Wastewater Pricing Nov 2005

## Current Inquiries

- Inquiry into Competition in the Water & Wastewater Services Sector
- Inquiry into Developer Contributions to the Water Corporation
- Review of the *Grain Marketing Act 2002*

# Gas Pipeline Infrastructure:

- DBNGP
- GGP
- AGN Dist System
- Kambalda Lateral
- 7 Licences



# Electricity Infrastructure:

- SWIN
- 42 Licences

Underdeveloped resources/committed infrastructure developments are shown in red.  
Developed resources/existing infrastructure are shown in other colours.

**ELECTRICITY GENERATION STATIONS**

- Selected private power stations
- Verde Energy-Horizon Power stations
- Wind
- Hydro
- Solar

**ELECTRICITY TRANSMISSION LINES**

- Western Power Lines
- Private Lines

330kV  
220kV  
132kV / 66kV

**WESTERN POWER ELECTRICITY DISTRIBUTION SYSTEMS**

- South West Interconnected System (SWIS) - Western Power's power lines in the SWIS are regulated by the Economic Regulation Authority
- North West Interconnected System (NWS) - Horizon Power's power lines in the NWS are not regulated by the Economic Regulation Authority
- Bromo: Regional Non-interconnected Systems
- Newman: Towns supplied by Electricity Supply Authorities
- Large permanent communities that generate their own electricity
- Carnarvon
- Denham
- Perth
- Mandurah

## ELECTRICITY INFRASTRUCTURE Western Australia ECONOMIC REGULATION AUTHORITY ~ July 2007 ~



# Rail

## Infrastructure:

- Westnet Rail
- PTA



# WATER SERVICES CONTROLLED AREAS

Western Australia

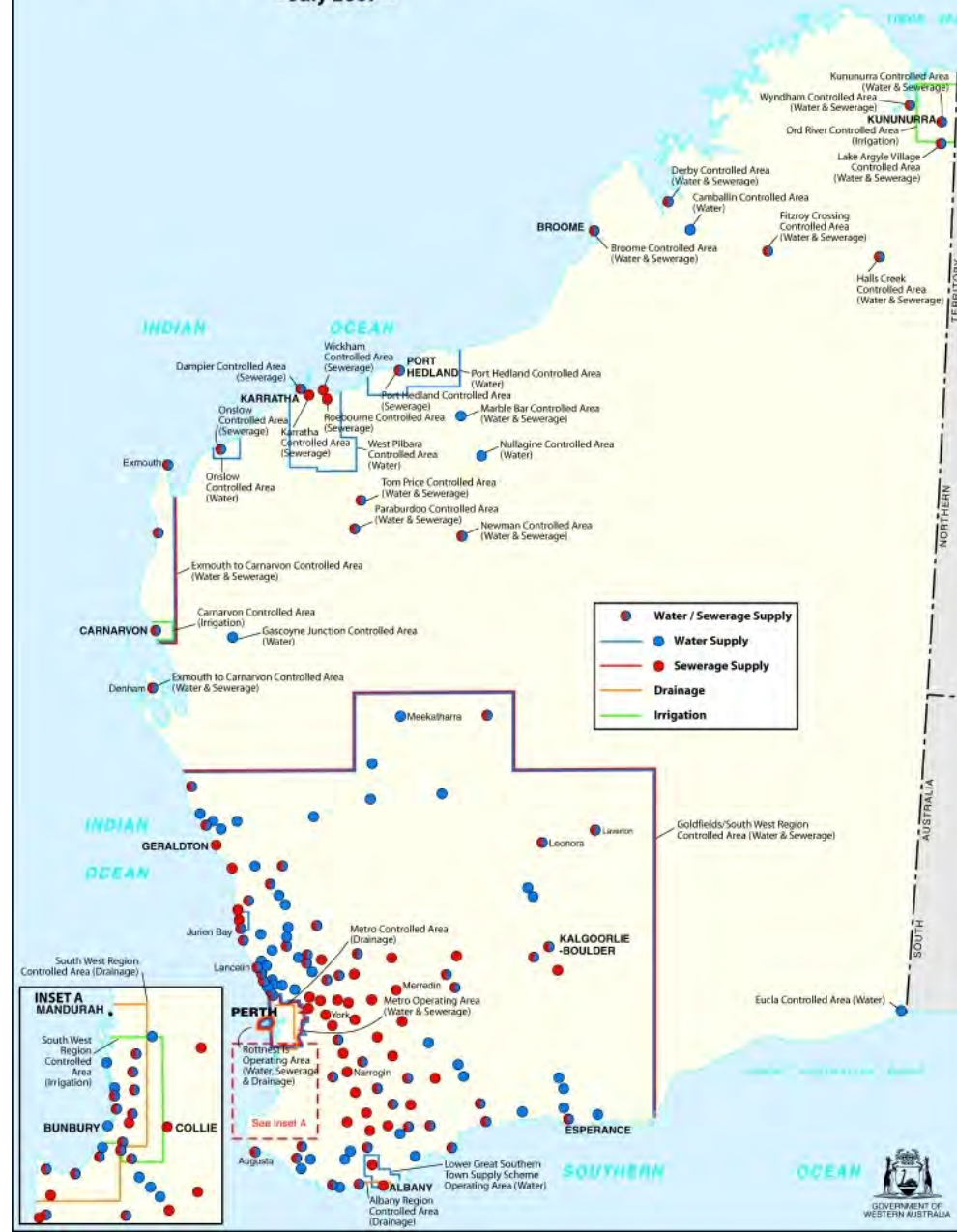
## ECONOMIC REGULATION AUTHORITY

~ July 2007 ~

# Water

# Services:

- 29 Licences





# Benefits of Independent Economic Regulation

- Facilitate private sector provision of services
- Make best use of monopoly infrastructure
- Enhanced competition upstream/downstream
- Consumer Protection and Fair Trading
  - Interface with Energy Ombudsman

# Achievements

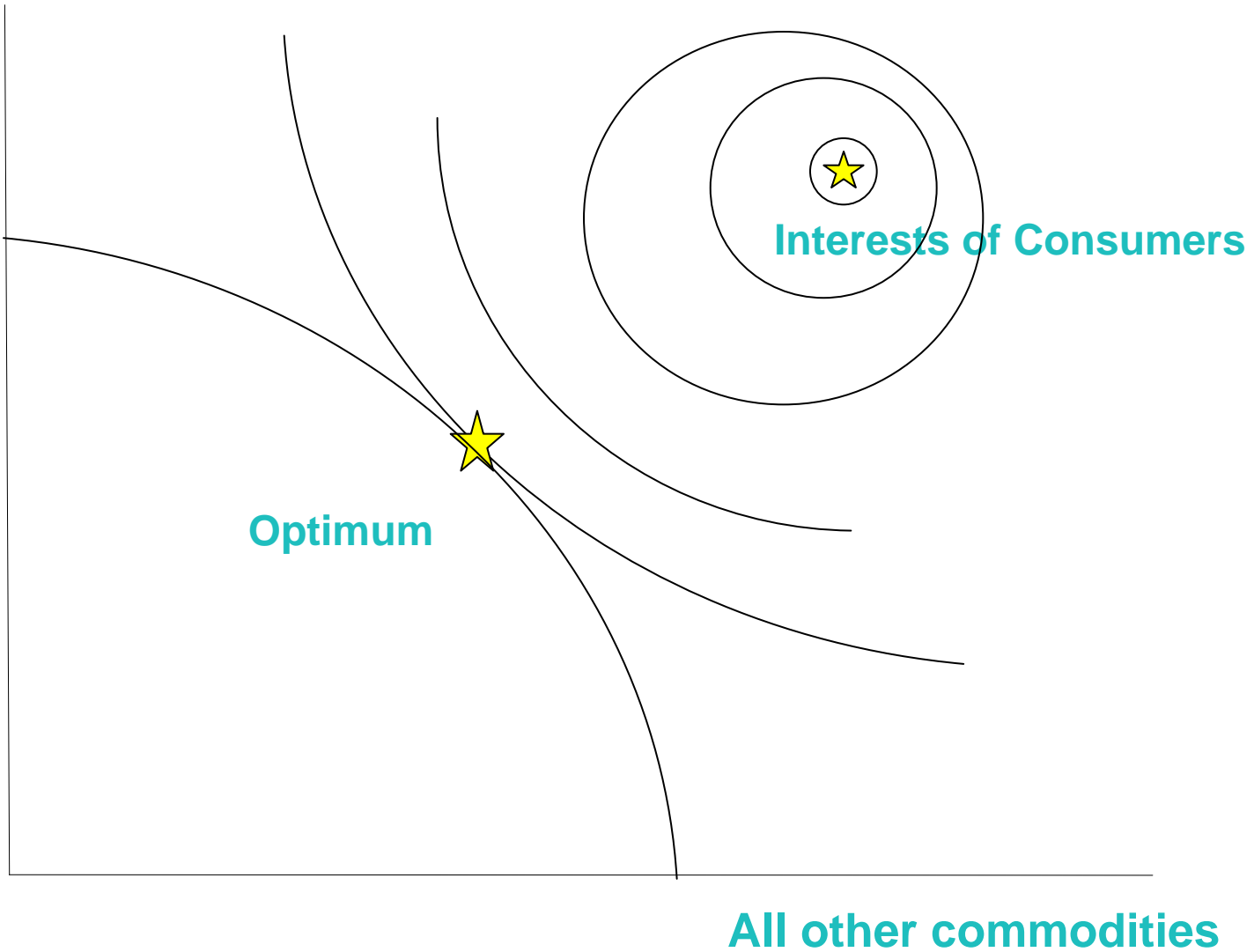
- Effective access arrangements: Gas/Electricity/Rail
- 78 Licensed Service Providers: Gas/Electricity/Water
- Active monitoring of asset management, operations & performance
- High degree of national consistency
- Independent advice:
  - Water pricing; Esperance desalination; School buses; Grain marketing; Competition in the water industry; Developer charges
- Confidence in independent regulation & advice

# Part 2: Some Economics

## Economic Efficiency

- Productive efficiency
- Allocative efficiency
- Dynamic efficiency (long run)
  - Inefficient markets waste resources
  - Singularity
  - Does not address the distribution of income or wealth

**Electricity**



# Optimisation

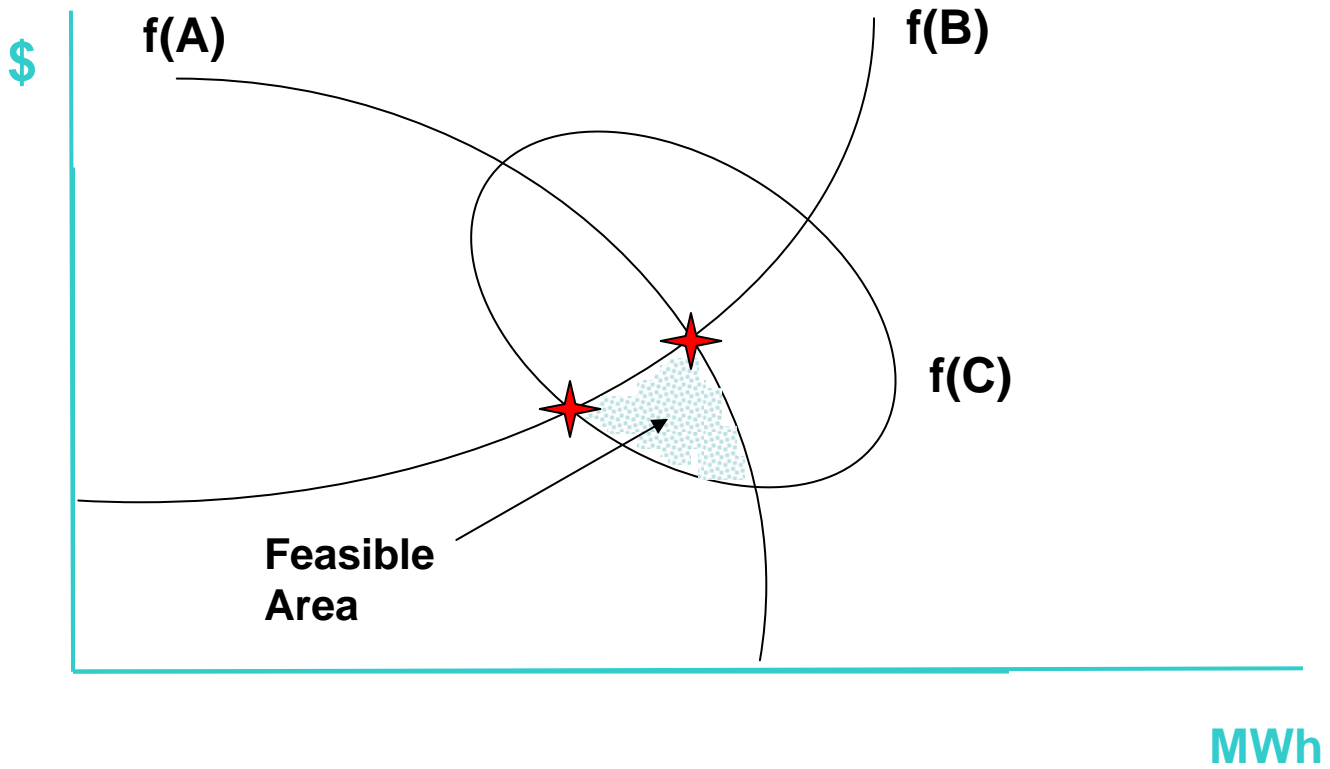
Max  $f(A)$

Subject to:

$f(B)$  and

$f(C)$

# Programming



# Objective Function

Maximise:

- Long term interests of consumers

Subject to:

- Social advancement
- Environmental protection
- Economic prosperity
- Interests of investors & service providers
- Re-elect Minister

# Objective Function

Maximise:

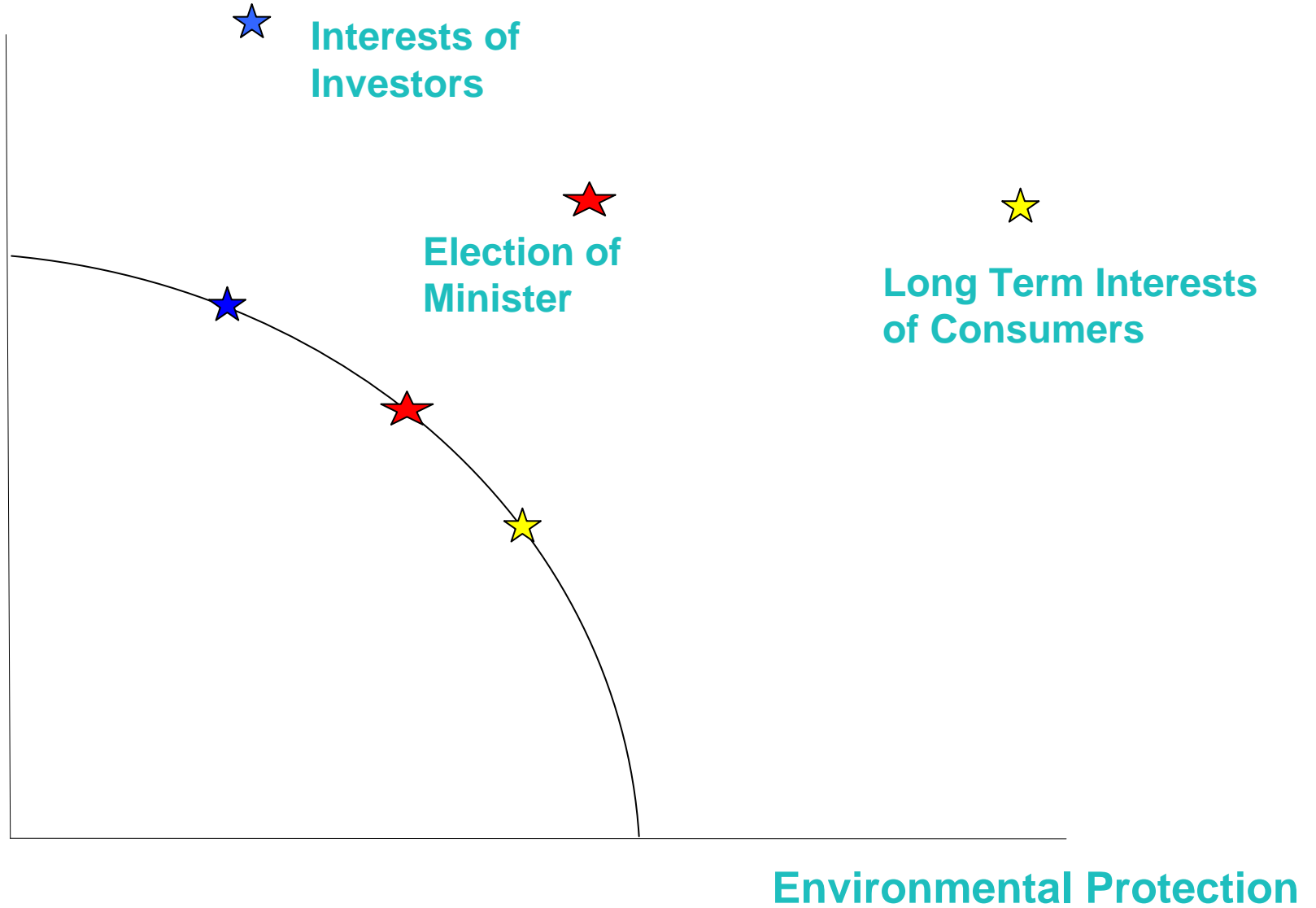
- Re-elect Minister

Subject to:

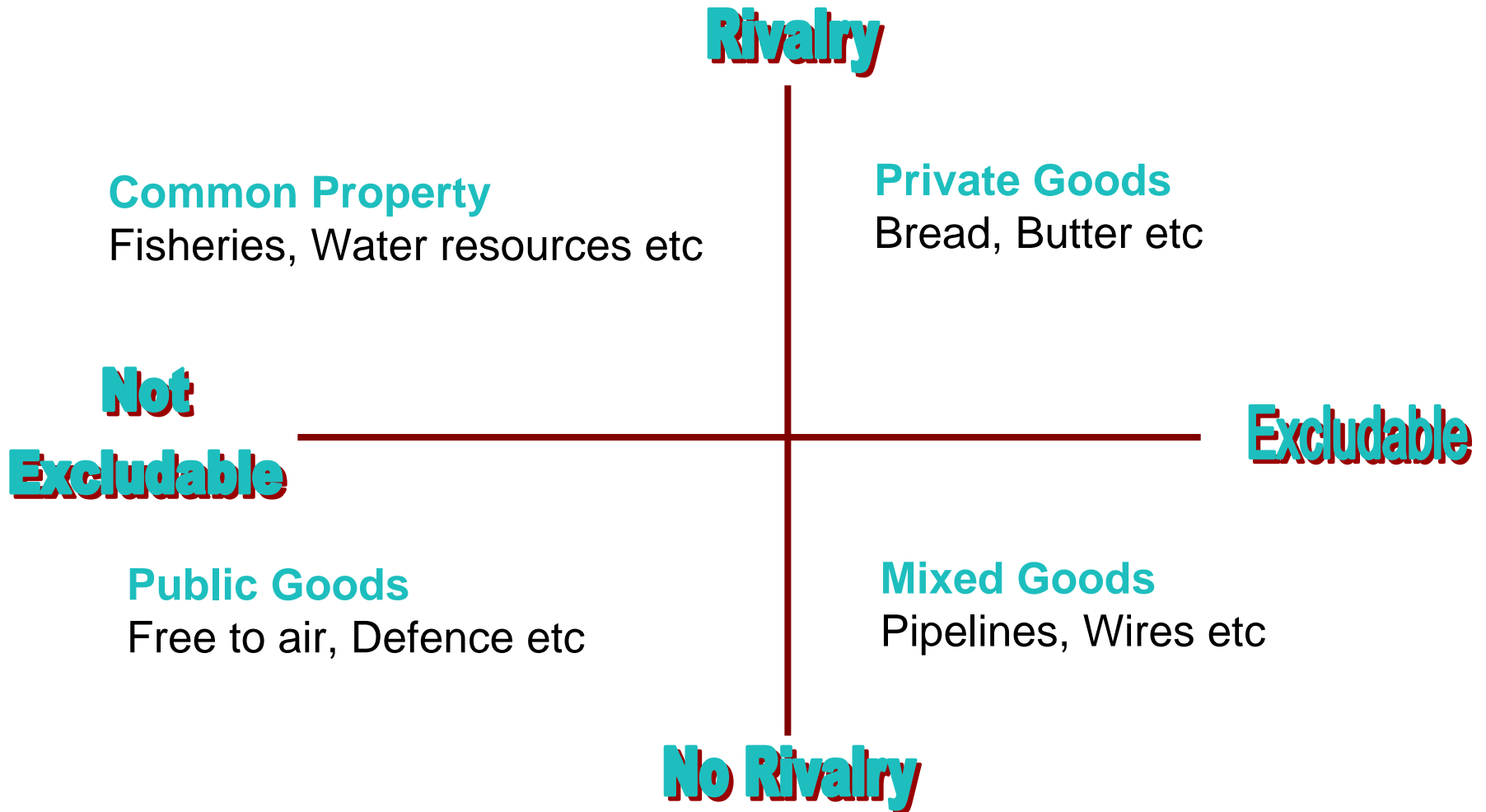
- Social advancement
- Environmental protection
- Economic prosperity
- Interests of investors & service providers
- Long term interests of consumers



# Economic Prosperity



# Supply of Goods & Services



# Monopoly

Other monopoly factors:

- Economies of scale
- Economies of scope
- Barriers to entry
  - infrastructure
  - legislative (legal)

# Externalities

- Environmental
- Social
- Technical

# Economics vs Law

- Economics is not necessarily fair
- Precedent does not count
- There is nothing equitable about economics

# No Proof of Hypothesis

“The great difficulty in the social sciences (if we may presume to call them so) of applying scientific method, is that we have not yet established an agreed standard for the disproof of an hypothesis.

Without the possibility of controlled experiment, we have to rely on the interpretation of evidence, and interpretation involves judgement; we can never get a knock-down answer. But because the subject is necessarily soaked in moral feelings, judgement is coloured by prejudice.”

(Joan Robinson, Economic Philosophy, 1962, p26)

# Prejudice

“Anyone who says to you:  
‘Believe me, I have no prejudices,’ is either succeeding  
in deceiving himself or trying to deceive you.”

(Joan Robinson, Economic Philosophy, 1962, p26)

# First Principles of Intervention

- There is a demonstrated need for intervention
- It creates the right incentives
- It needs to be the best way of doing it
- It's least restrictive on consumer sovereignty
- It's benefits outweigh its costs
- It's administratively simple, user friendly &  
⇒ It actually works



# Types of Intervention (Regulation)

- Public sector ownership & control
- Price control of private sector
- Market based regulation:
  - Open access
  - Structural separation
  - Markets in contestable elements
  - Artificial markets where possible
  - Price or revenue cap if all else fails
- Monitoring / transparency

# Economic Regulation

**Certainty**

Inflexible  
Prescription

Flexible  
Guidance

**Discretion**

Legislated  
Mayhem  
(Legal utopia)

Dictated  
Anarchy

## Part 3: Case Example – Epic Energy

### Dampier to Bunbury Natural Gas Pipeline

- Over 1500 kms long (1845 kms of piping)
- Capacity 600 TJ/d
- Main gas supply for Perth & SW
- “Covered” by Gas Code
- Pipeline privatised in March 1998
- Epic paid \$2,407 million
- The SA Act & Code received Royal Assent 18 December 1997
- Law commenced in WA 9 Feb 1999

## DBNGP: Draft Decision - The Problem

- Regulator did not approve Access Arrangement
  - Regulator unable to verify regulatory compact on tariffs
  - Epic sought initial capital base of \$2,570.34 million
  - Regulator's value was \$1233.66 million
  - Epic sought tariff to Perth \$1/GJ
  - Regulator provided 0.75 cents/GJ
- ⇒ Epic in financial trouble
- ⇒ Epic takes Draft Decision to Supreme Court

## What Epic sought

Epic sought to quash the draft decision together with prohibition to prevent the Regulator proceeding further with the draft decision.

*Mandamus* was sought to direct the Regulator to consider again Epic's proposed Access Arrangement for the DBNGP according to law.

Further, or alternatively, declarations were sought.

## What Epic argued

The Regulator misconstrued the Gas Code in many identified respects, in particular with respect to s 2.24 and its intended application within the Code and the weight which should be given to the factors it identifies, and also, with respect to s 8, especially s 8.1, s 8.10 and s 8.11.

etc

# Provisions of the Gas Code

- S 2.24 lists things that the Regulator must consider
- S8.1 lists the objectives of a Reference Tariff & Policy
- S8.10 factors that should be considered when establishing an Initial Capital Base
- S8.11 the initial Capital Base for Covered Pipelines that were in existence at the commencement of the Code normally should not fall outside the DAC and DORC

# Difference between EPIC and the Regulator

- The Regulator viewed S8 of the Gas Code as stand alone
- Epic argued that the tariff determination under S8 was to be guided by s2.24
- S2.24 provided the most powerful support for the amount paid for a pipeline to be taken into account in determining the ICB
- Importantly, if Epic paid too much it was exercising monopoly power – the circularity problem



## Decision of the Court

- S8.1 guided the determination of the Reference Tariff and Tariff Policy but to the extent that there were inconsistencies in the S8.1 objectives, S2.24 factors would need to be applied to guide the regulator in exercising his discretion.
- The amount paid by Epic for the pipeline was a legitimate business interest as provided for by S2.24.
- While S2.24 needed to be given weight by the regulator, resolving conflicts between the different factors was at the discretion of the regulator.

## Declarations of the Court (The Outcome)

- The Court did not quash the Draft Decision and did not prohibit the regulator from proceeding.
- The Court did not grant prerogative relief.
- Instead the Court gave orders to direct the regulator's further consideration (declaratory relief).

## Further Final Decision

- Issued on 30 December 2003
- Initial Capital Base \$1,550 million
- Tariff to Perth \$1
- Epic financially unsustainable
- Pipeline sold to Duet, Alinta & Alcoa
- Now operated by DBP Transmission P/L
- Is being expanded





**DON'T  
DESTROY  
EPIC ENERGY**

**I've been waiting  
my whole life for  
a decision from  
OFFGAR**

# Conclusion/Lessons

- Strive for continuous improvement
- Consult widely
- Be open and transparent
- Listen and take advice
- Respect independence
- Seek solutions to mitigate disputes
- Be firm but fair

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**Independent Regulation and Advice**

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