

***Power Sector Reform:  
a retrospective analysis***

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# ***Context and Background***

- **The initial ideas: coming from developed countries**
- **An “Era” of Power Sector Development came to the end**
  - **“Rebuilding” of the system, National Networks integration, Access to Electricity, Investment and Economics to Scale, Future expansion, New Technologies, New Energy Sources**
- **Open of a new era as an opportunity for private investor**
- **Industrialized and, specially, Developing Countries as attractive markets**
- **Great opportunity: Demand and Supply was there**

# ***Difference on Situations***

## **Developed Countries**

- Big and Mature Systems
- Own managed
- High developed local capital markets
- Depending on existing local capital
- Driven by efficiency and competitiveness

## **Developing Countries**

- Small and/or Non mature systems (access)
- Influenced/conditioned by multilateral agencies
- No existence of local capital markets
- Depending on foreign investment
- Driven by macroeconomic instability (LA)

# *Conditions and Key Actors*

- A “new” paradigm: *Liberalization, Market forces, Openness, Free flow of capital and goods*
- Adjustment and downsizing Programs
- Extrapolation of general ideas and slogans: *Absence of local diagnosis*
- Divestiture and Deregulation as key words: *Policy and regulation as an inevitable evil; Public Benefit as a “expected spillover”*
- Multilateral Agencies as a key arm: *Support, promote, finance, create the conditions, impose, ...*

# *Latin America Key Facts*

- Economic Reform as a background: *macroeconomic crisis, external debt, fiscal budget,...*
- Economic as the main dimension
- Blow up the need of future investment
- Reform and privatization as an unique exit
- Create the conditions to attract foreign investment and guarantee revenues: *Convertibility Law, Brady Plan, Liberalization and Openness, Total liberalization of Capital Markets, Deregulation of markets of goods and services, Reform of the Pension System, Total divestiture of Public Utilities, Increase Indirect Taxes, Abandon of active public policies,...* (Argentine example)

# *Dates of the Main Power Reforms*

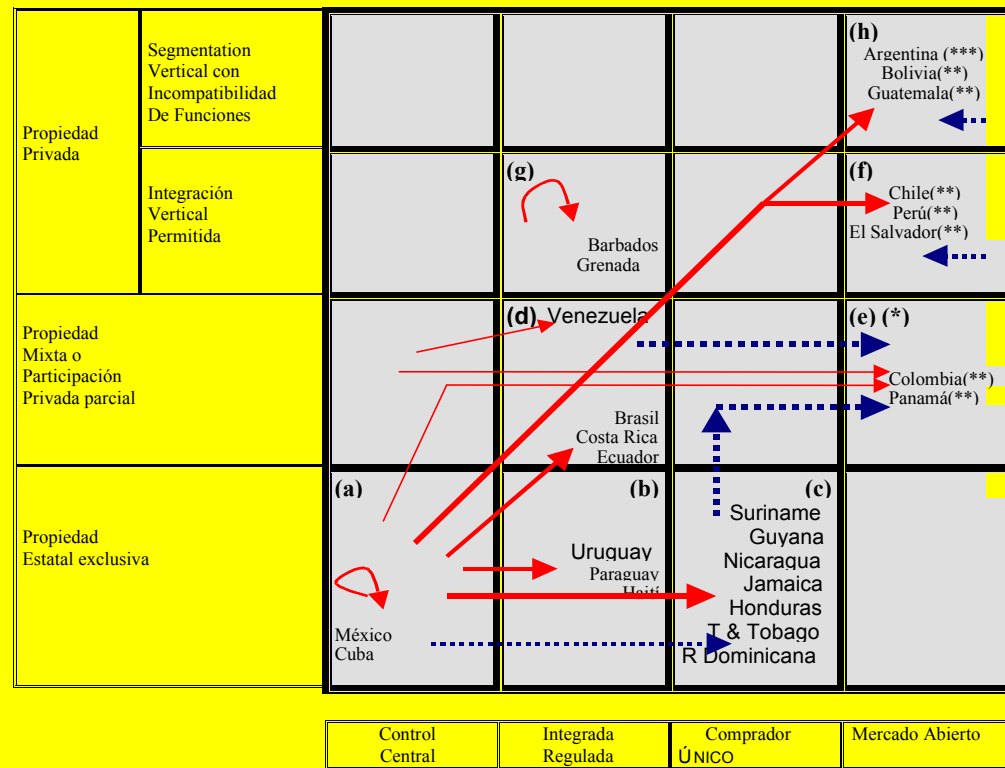
- *1982: Chile*
- *1992: Argentina*
- *1993: Peru*
- *1994: Bolivia, Colombia*
- *1996: Guatemala*
- *1997: Panama, El Salvador*
- *1998: Nicaragua*
- *2001: Jamaica*

*Rest of the countries: no changes, minor changes or in process*

# Energy System Restructuring

- Reform modes
  - Energy Chains: Key Issues
    - Power
    - Natural Gas
    - Oil
  - Power Sector Reforms
    - From a Central Control to an Open Market

Evolution of reform processes - Power Systems



.....▶ Trayectorias futuras probables

(\*) Con o sin desintegración vertical (incompatibilidad de funciones) estricta

(\*\*) Con partición horizontal débil

(\*\*\*) Con partición horizontal fuerte

# *Some Key Issues*

- A system of increased complexity: *new functions, more and new players, new behavior, segmented, regional integration path, new conflicts, new framework for energy policy, new challenges, new strategies, broader scope, legal and regulatory changes,...*
- Role of the State: less or more important than before?
- Government legitimacy and responsibility remains the same, before and after?
- Reform: similar but with institutional, legal and regulatory specific characteristics in each country
- Synonymous:
  - Privatization is not synonymous of competition
  - Restructuring can not be view as synonymous of privatization
  - Competition is not synonymous of deregulation



# ***Lessons learned: approaching sustainability***

- **Success or failure of reform depends of many issues:**  
*Degree of maturity of the system, Coordination, formulation, execution, control and rationality of decision making process, size and structure of the system and adopted coordination scheme, adequate diagnosis,...*
- **Legal and Regulatory Framework with adequate and powerful regulatory bodies as a first step**
- **Subsidies recognition:**
  - **Electrification needs subsidies, no system in the world has been developed without subsidies**
  - **Access needs subsidies**
  - **Renewable and Clean have additional costs: market behavior is not for such sources**
- **Look for the “prescription” adapted to local conditions**
- **Not to confuse goals with instruments**

# ***Pending or New Challenges***

- **Access, availability and affordability to Modern Energy**
- **Security of Supply**
- **Concentration and Competition**
- **Regulation (Oversight and Monitoring) improvements**
- **Public Benefits address**
- **Regional Integration**
- **Civil Society and Citizen Participation**

# *In Summary*

**Sustainability as a Key Issue**

⇒ Security

**Governance as a Key point**

- *Guarantee of Supply is still an issue*
- *Full Benefits for whole citizens remain a challenge*
- *New rules to push Trade and Integration are needed*
- *Energy Efficiency Improvements should be promote*
- *Public Benefits need to be address*
- *Energy should be seen as an Instrument for Sustainable Development*
- *Capacity Development Policy as a core need*

*Second Generation reforms offer the opportunity to  
address forgotten and new issues*

# *Some Conclusions*

- *Energy policy a part of Sustainable Development Policy (General Policies)*
- *Restructuring of energy industry is part of the energy policy*
- *Restructuring as part of the strategy in policy design and implementation*
- *Reform has to be address and assess in an integrated form: power sector is not isolated in the energy industry*
- *Legal, regulatory and coordination schemes have to be adapted and assess in view of local conditions*
- *No prescription is universal valid*

*Annex*

# Energy System Restructuring

- Reforms in Small markets
  - Less than 5000 MW
  - Scale and Scope Economies
  - RI or CU Modes
  - Current Situation

Las reformas en los sistemas eléctricos y el tamaño de los mercados

Potencia Instalada de Generación (MW)	Control Central		Sistema Integrado Regulado		Comprador Único		Mercado Abierto									
	Parte Integral del Estado	Cierto Grado de Autonomía Empresarial	Estructura Integrada única	Varias Unidades Empresarias	Distribución Integrada	Distribución Desintegrada	Integración Vertical Permitida	Segmentación Vertical Obligatoria								
0-500	Haiti		Barbados Grenada		Suriname Guyana Nicaragua		El Salvador      Bolivia									
500-1000					Jamaica Honduras	Panamá(**)										
1001-2000	Cuba	Uruguay	Costa Rica		T. & Tobago		Guatemala									
2000-5000	Paraguay		Ecuador(*)		República Dominicana		Perú									
5000-10000	Chile															
10000-20000									Colombia      Argentina							
>20000																
			Venezuela(*) Brasil(*)		México											

(\*) De acuerdo con el enfoque plasmado en la normativa regulatoria, estos países deberían ser incluidos en la modalidad de coordinación de MA. La ubicación en el cuadro refleja la situación de transición.

(\*\*) La introducción de los mecanismos de mercado está prevista para el año 2001. En la transición, la empresa de transmisión será comprador único (sin finalidad de lucro) de la energía para ser transferida luego a distribuidores.

## *An emblematic case*

**Argentine Macroeconomic Crisis as the result  
of 10 years of Economic Policy:**

**Governance as a key challenge**

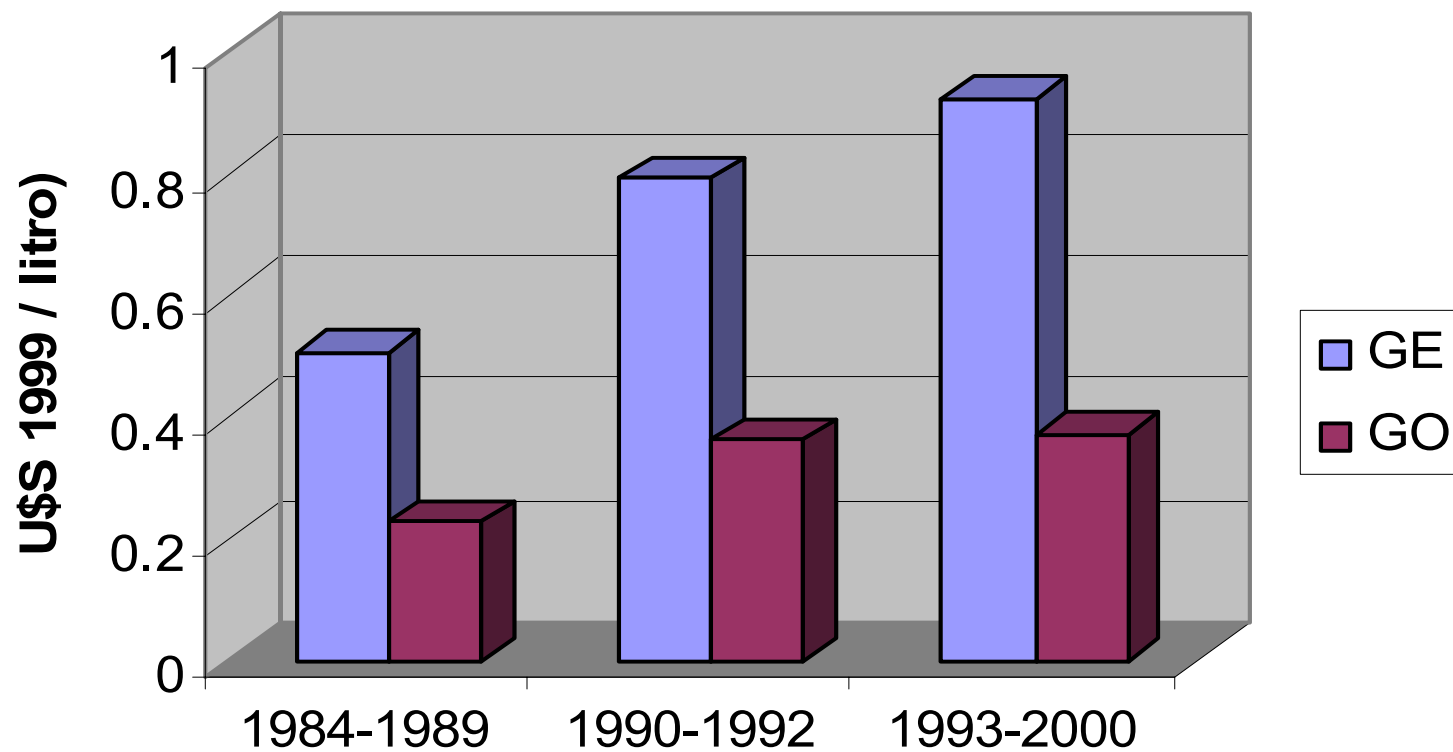
# *Energy Sector Challenges: an outcome from structural conditions*

- *Prices and tariffs in US Dollars (Convertibility Law)*
- *Lack of control, oversight and monitoring of Enterprises strategies (Liberalization and deregulation)*
- *Current default of several energy enterprises (Lack of control)*
- *Enterprises benefit send to external shareholder (Free flow of capital) at the same time that new investment were based in external debts (No control of indebtedness, no control in use of benefit, no obligation of reinvestment)*
- *Future Supply not guarantee (Change of conditions)*
- *Pressure on Government:*
  - *Ask for transfer to the State the external debt or to be recognize in the framework of the convertibility law (Juridical Security)*
  - *Renegotiations of contracts, obligations, quality of services, prices, tariffs, concession time, etc.*
- *Government field of maneuver is not very wide*

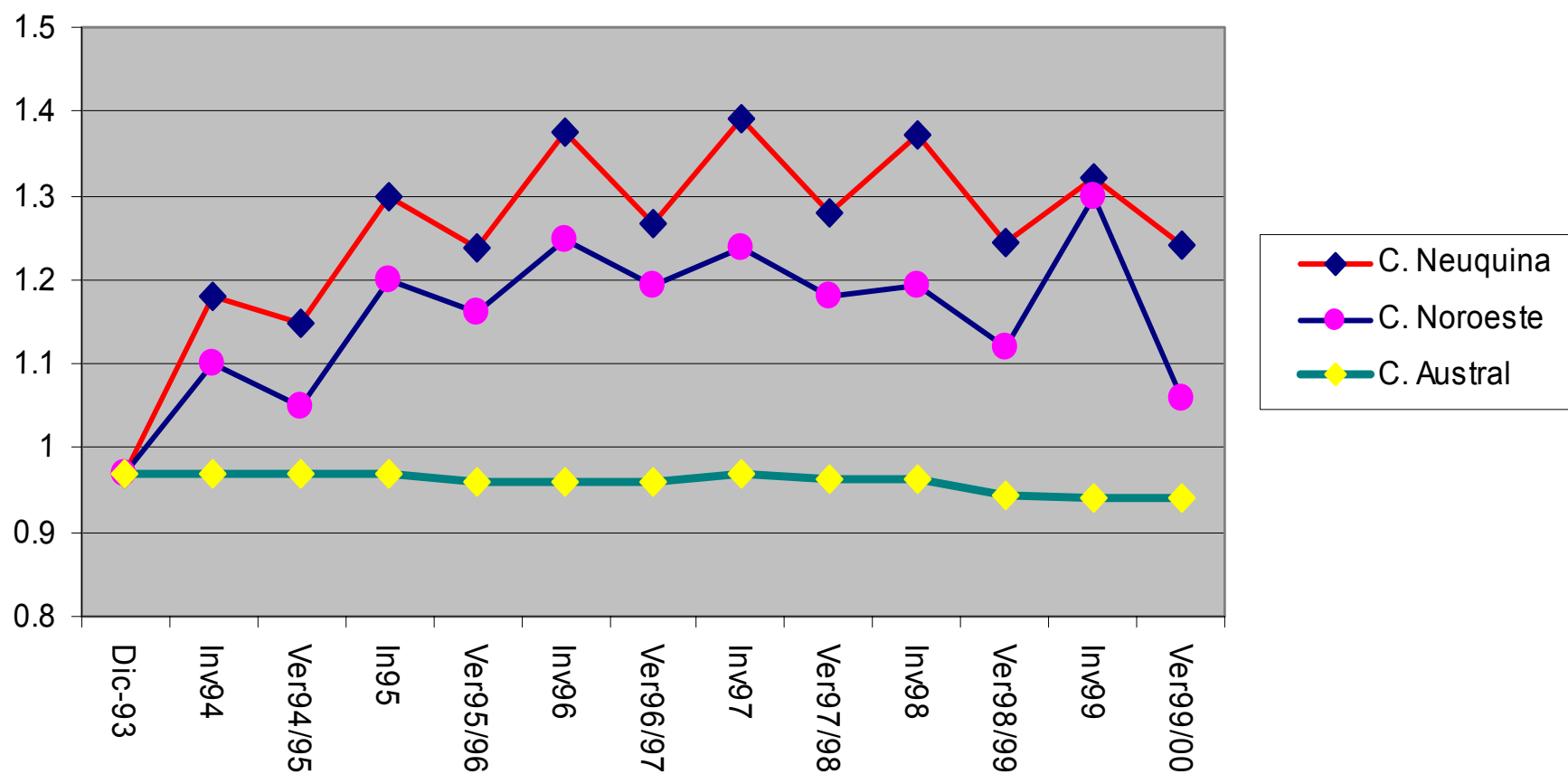


# ***Evolución de los Precios Finales de los principales derivados***

## **Evolución de los precios de los combustibles**

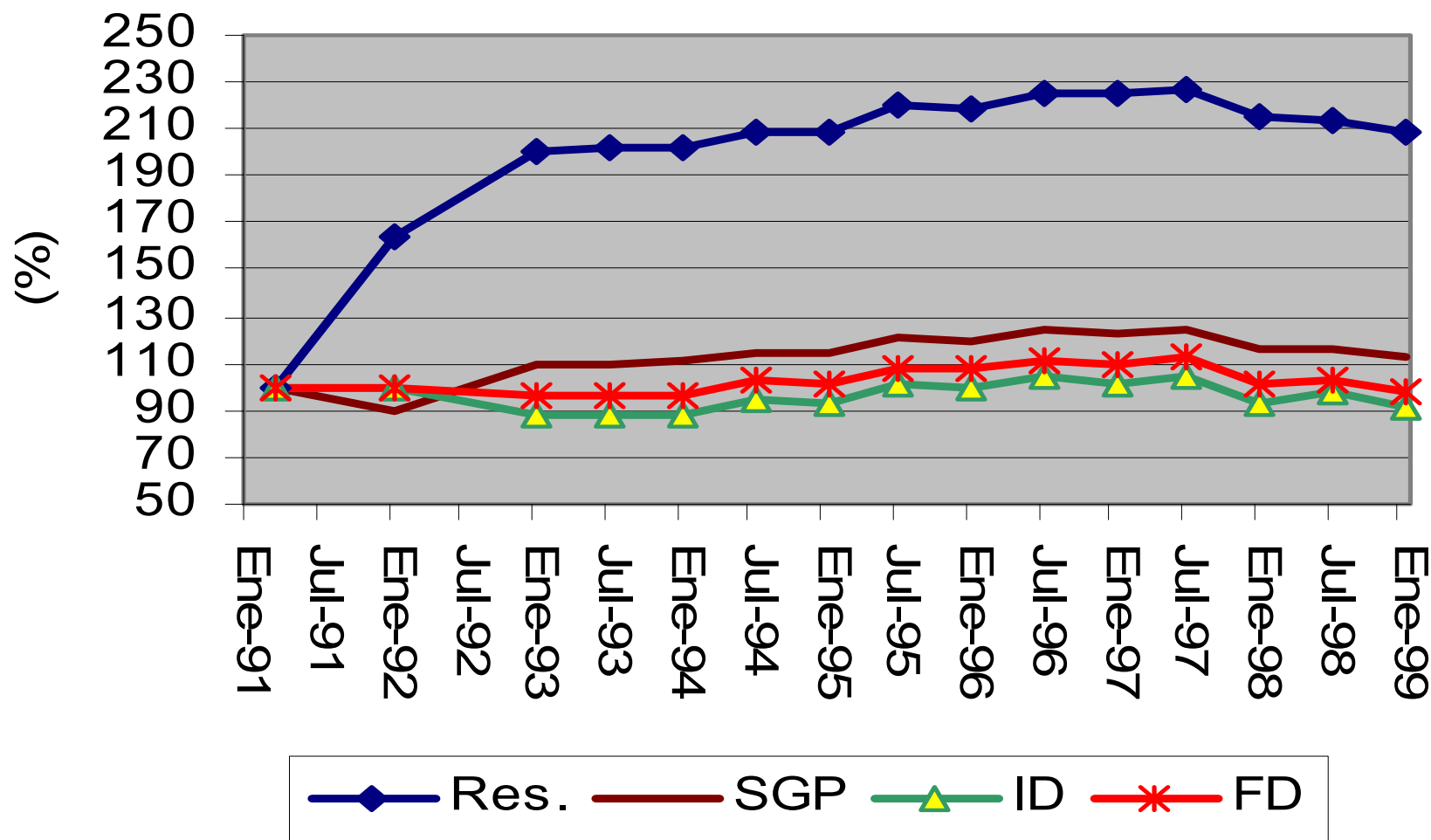


# Gas Natural: Precios del gas en boca de pozo (U\$S/MBTU)

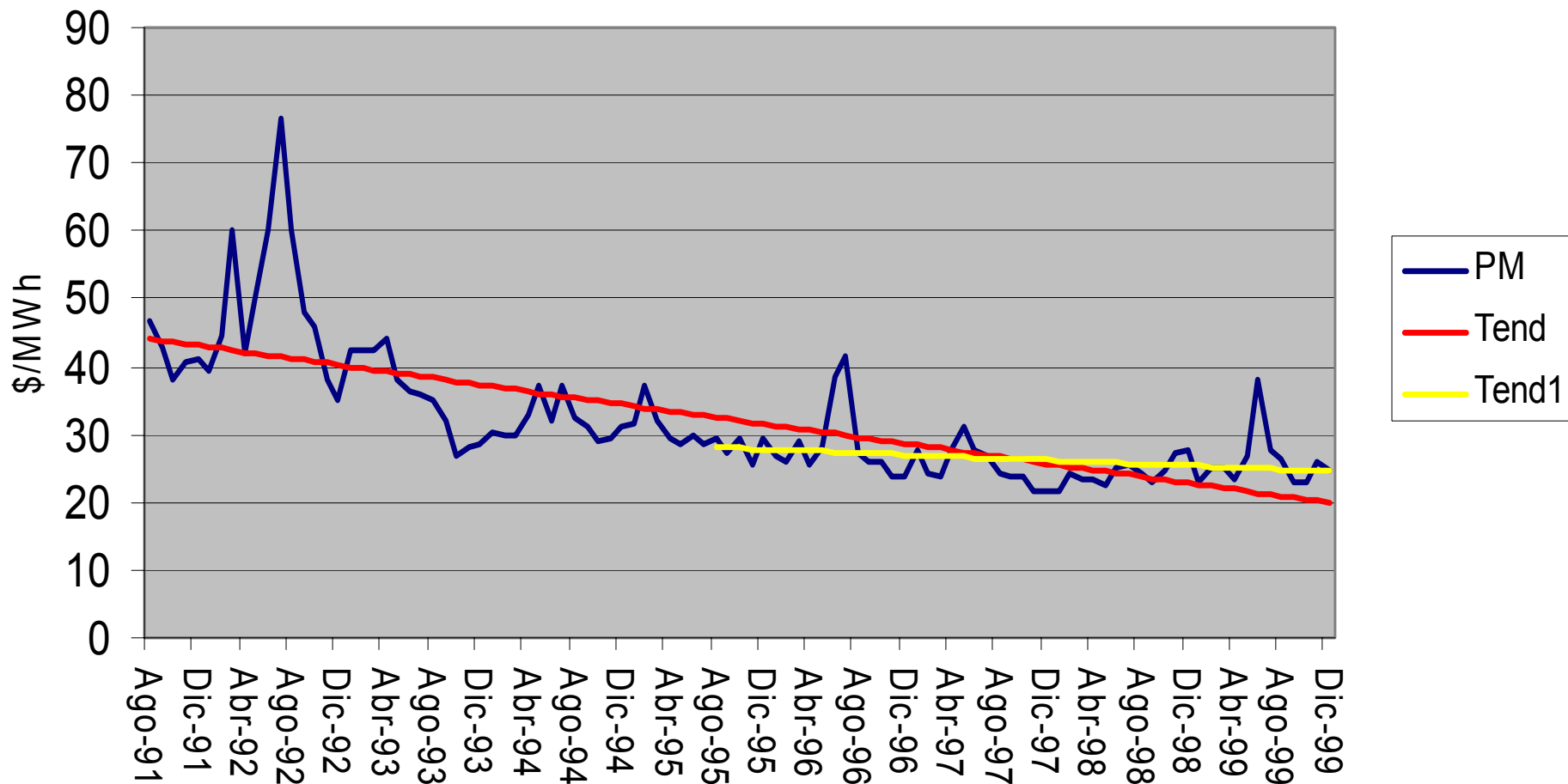


# Gas Natural: Evolución de las Tarifas a usuarios finales

(Marzo 1991 = 100)

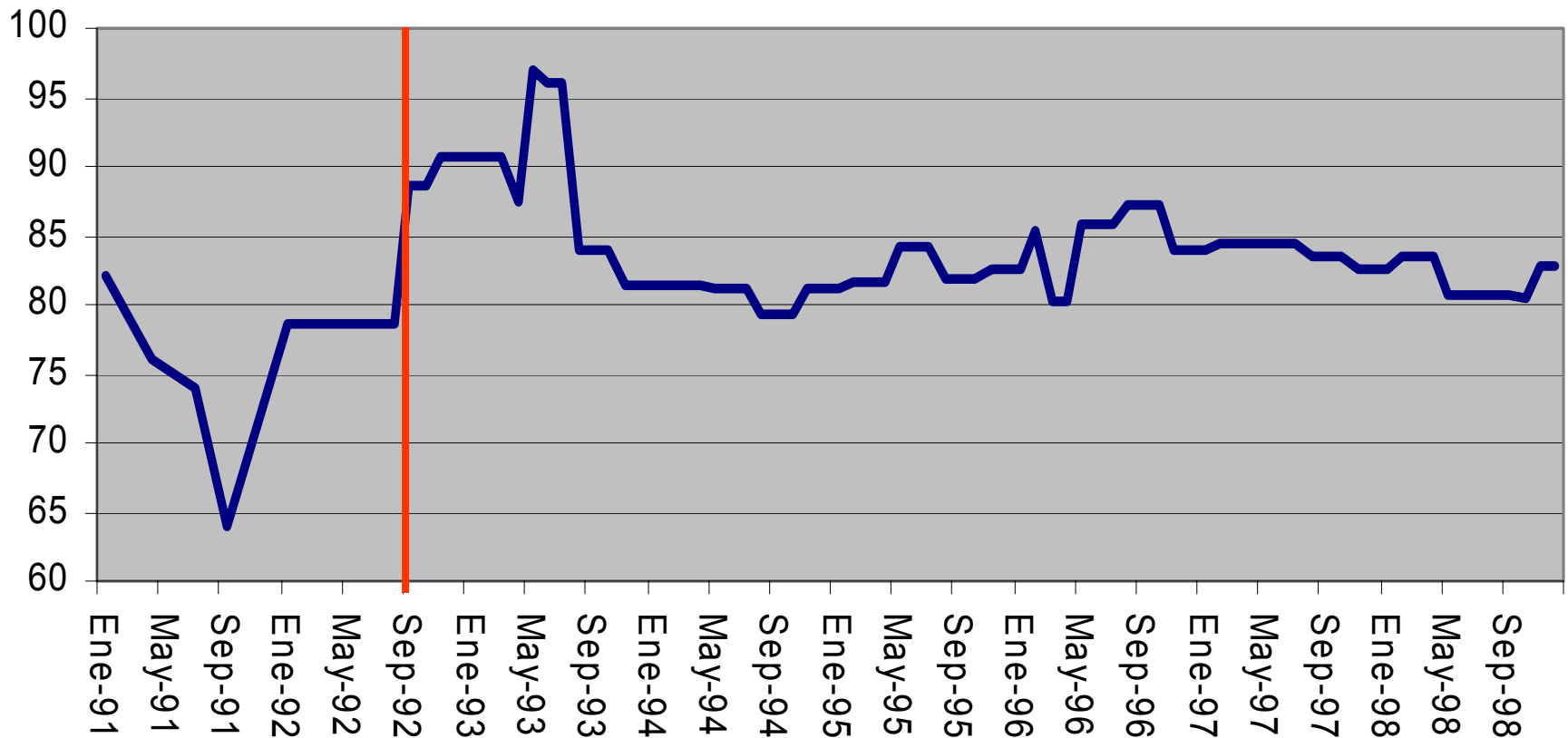


# Electricidad: Evolución del precio monómico en el MEM



# Gran Buenos Aires: Evolución de la tarifa media Residencial (200 KWh/mes)

Milésimas de u\$s/KWh



# *Gran Buenos Aires: Estructura de la tarifa media Residencial*

