

Southern Cone Energy Integration – Signposts for the Future

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Santa Cruz de la Sierra, Bolivia

Jed Bailey
Associate Director – Latin America

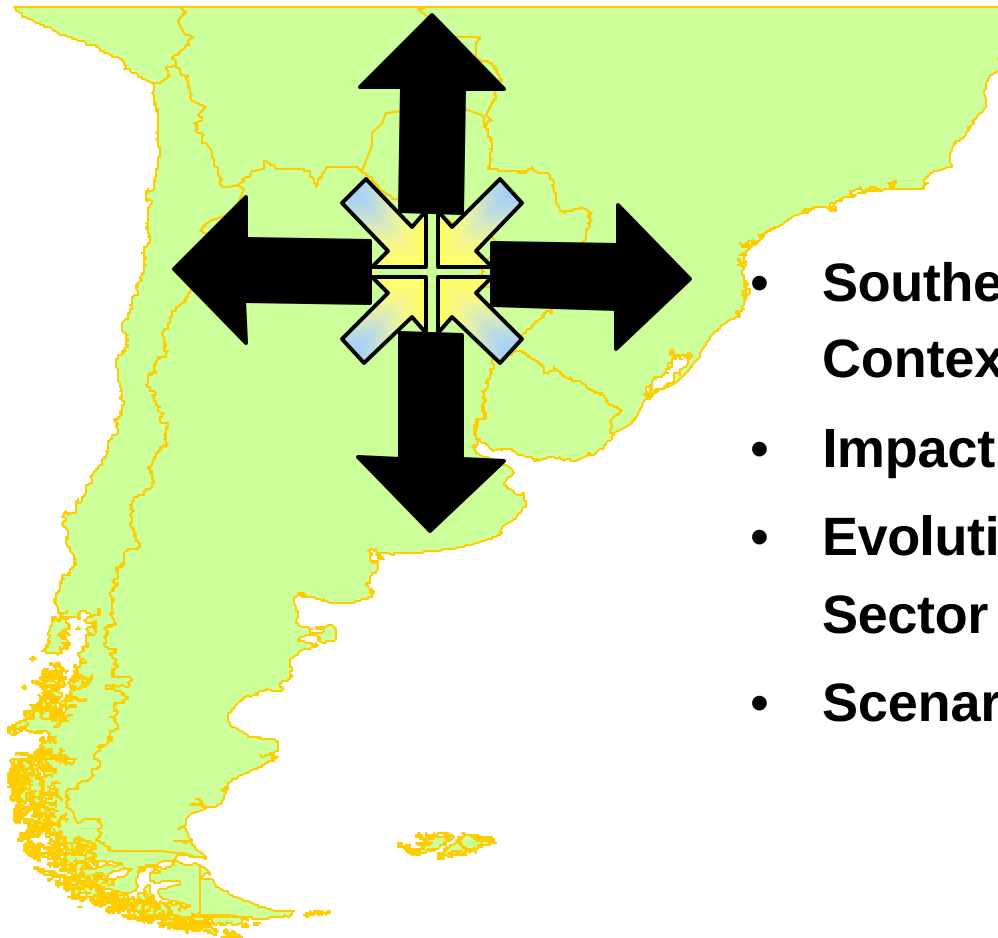
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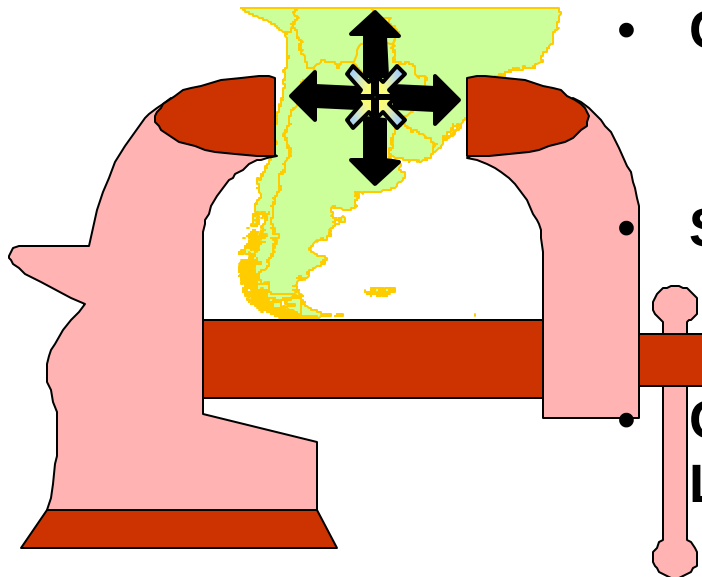


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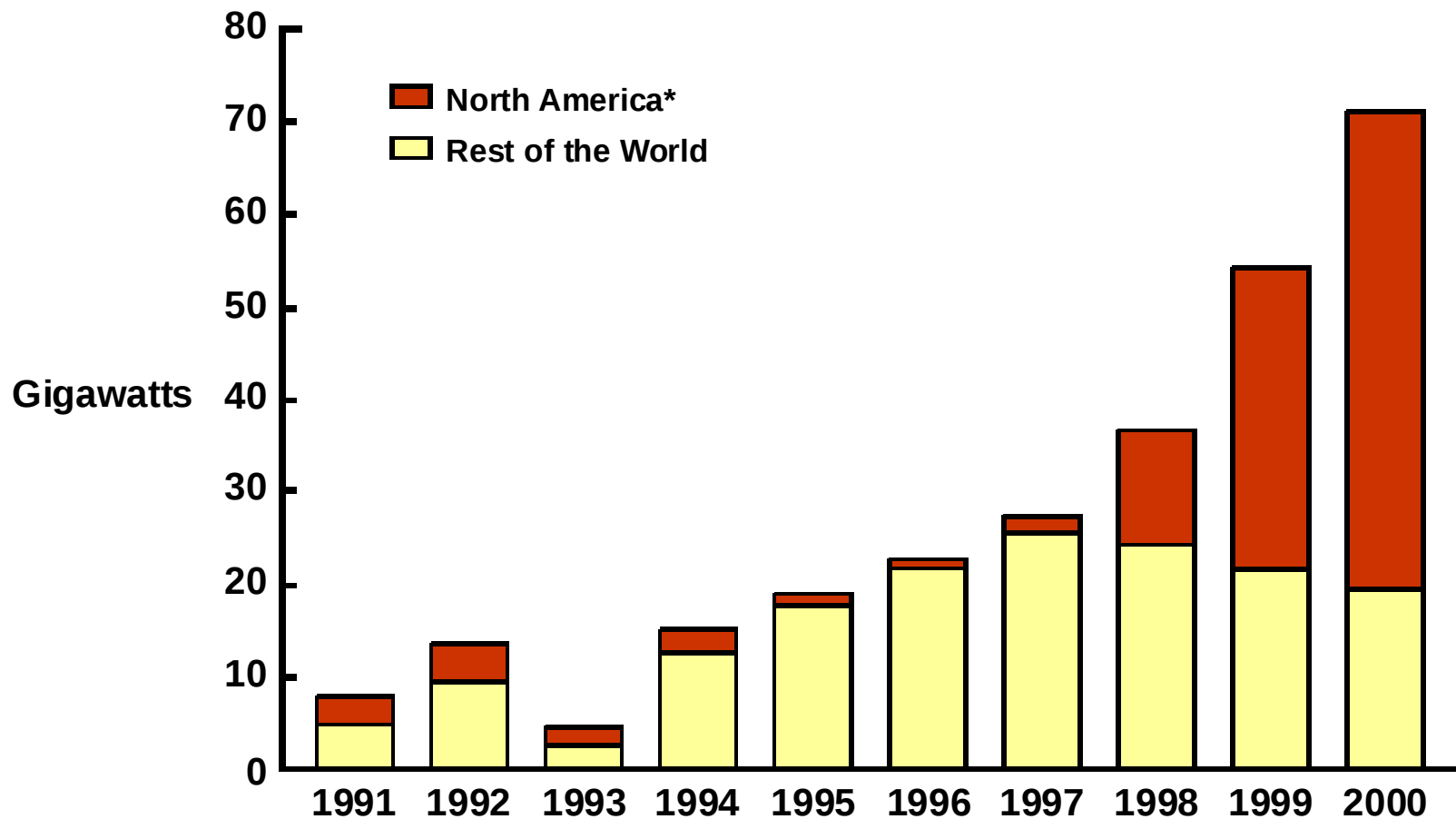
- **Southern Cone in the Global Context**
- **Impact of the Argentine Crisis**
- **Evolution of the Brazilian Power Sector**
- **Scenarios for the Future**

Southern Cone Energy Integration Under Pressure



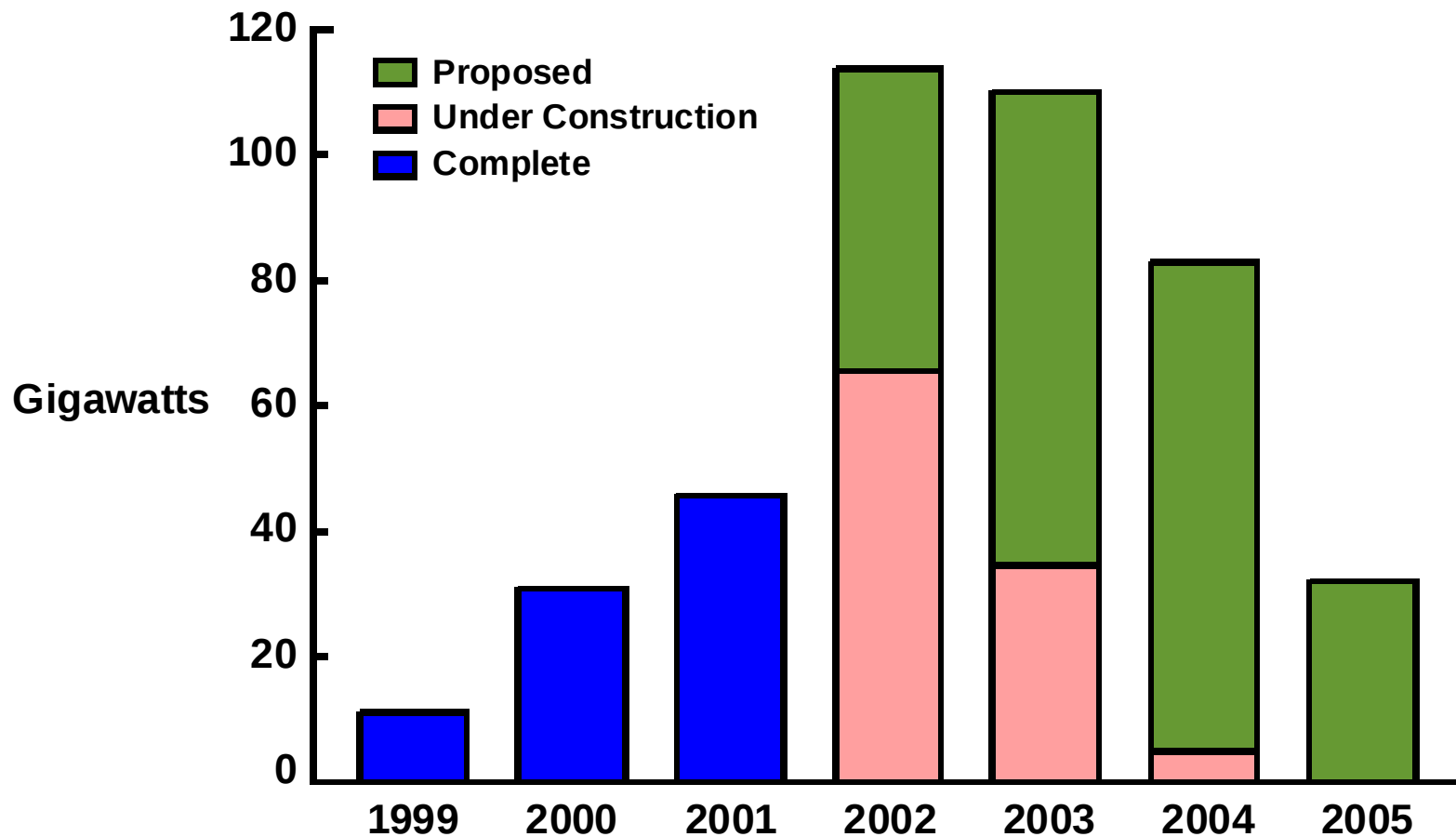
- **Global economic concerns remain**
 - Timing of US recovery not yet assured
 - Japan and Europe are sluggish
- **Slow Progress on Regulatory Reform**
 - Brazilian power market development critical for gas and power integration
- **Growing perception of risk across Latin America**
 - Deepening Argentine crisis
 - Political volatility in Venezuela and Colombia
 - Elections in Bolivia and Brazil
- **Capital becoming more difficult to obtain**
 - Energy sector worldwide
 - Latin America in particular

Total International Greenfield Private Power Development, 1991–2000

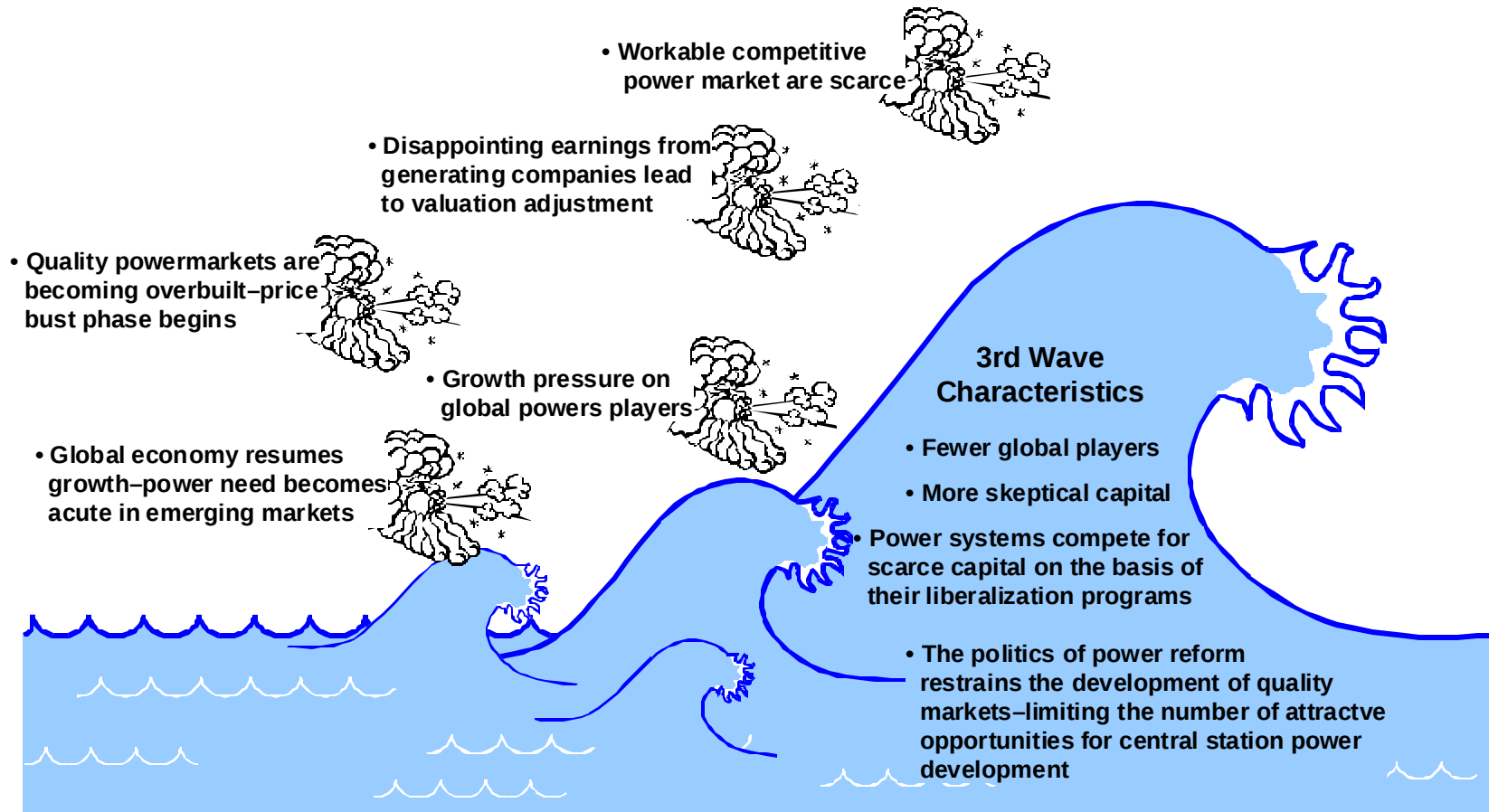


Source: Cambridge Energy Research Associates.
*Canada and the United States
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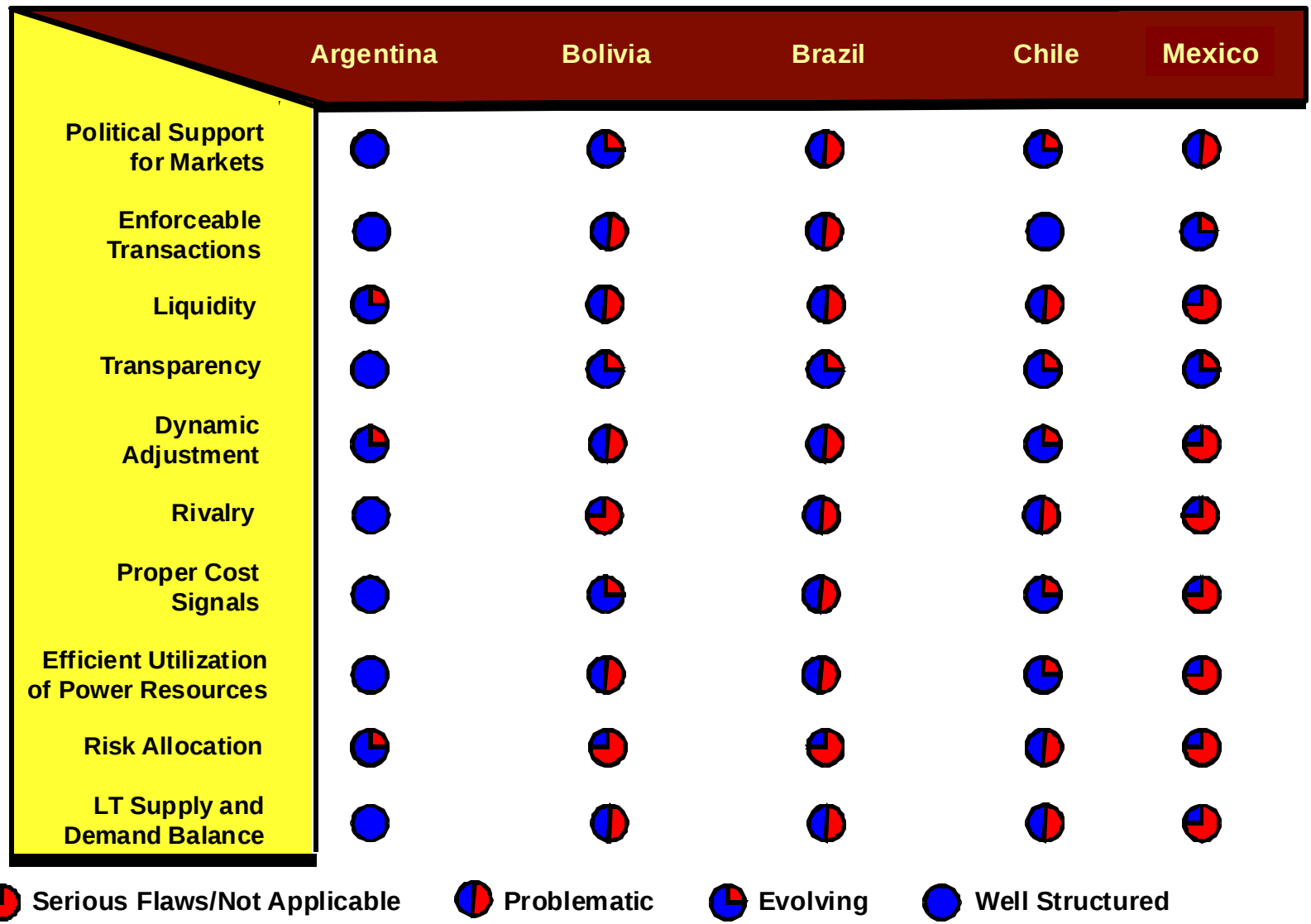
North American Generation Project Status, 1999–2005 (as of January 1, 2002)



3rd Wave: Driving Forces



Latin American Power Market Ranking



Source: Cambridge Energy Research Associates.
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Foundations of Workable Competitive Power Markets

<u>Function</u>	<u>Structural Element</u>	<u>Mechanisms</u>
Political support for markets	Independent market Authority —neutral and independent regulation	Level Playing Field: anti-trust/market power restrictions; (includes some of the basic things like political/economic stability, without which political will for markets would be impossible)
Enforceable transactions	Commercial code	Impartial court system; Access to international arbitration
Liquidity	Wholesale–retail price link	Pass-through of wholesale price changes to end-users; Efficient metering, billing and collections
Transparency	Free information exchange	Accessible data on transactions, prices, transmission congestion, supply additions, demand, financial reporting, etc.
Rivalry	Numerous independent buyers and sellers with commercial incentives and minimum efficient scale.	Adequate transmission network; No price controls; Corporatization of remaining government players; Wholesale market with sufficient scale

Foundations of Workable Competitive Power Markets (continued)

<u>Function</u>	<u>Structural Element</u>	<u>Mechanisms</u>
Proper cost signals	Competitive input markets	Competitive access and prices for fuel, labor, equipment, parts, etc.
Efficient utilization of power resources	Spot energy market	Sufficient technology infrastructure to process and settle numerous transactions.
Risk allocation	Futures market; Bilateral market	Trading hub; Alignment of ownership and control
LT supply-demand balance	Capacity market	Capacity Requirement; Deficiency penalty
Dynamic adjustment	Ease of entry and exit	Short lead time—efficient and fair system of siting, permitting and construction

Argentina's Crisis Escalates

Social

Duhalde walks
a tightrope

Political

Three
governments
in two weeks

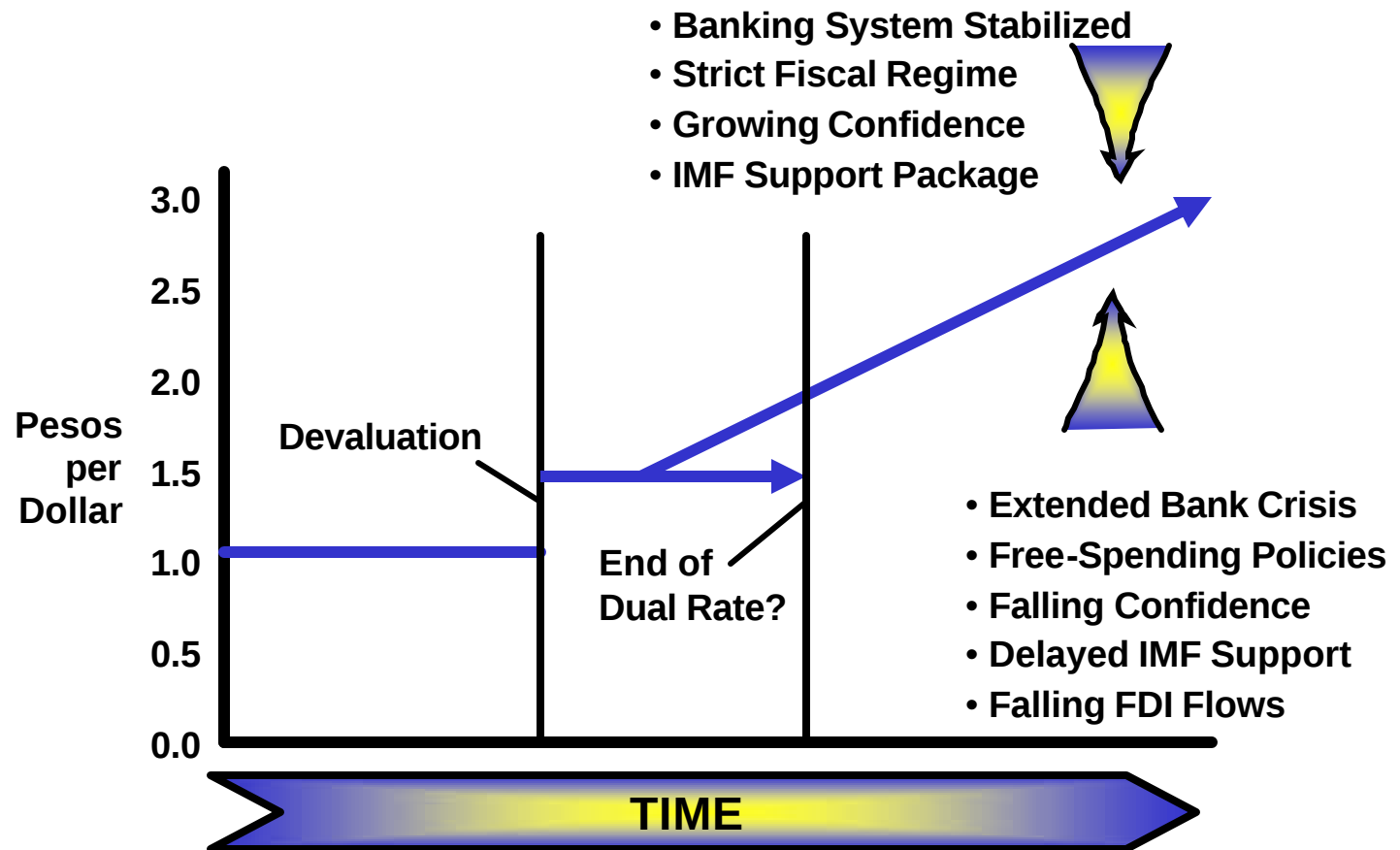
Financial

Increasingly strict
austerity measures

Economic

Recession drags into four years

Pressures on the Argentine Peso



Implications for Argentina's Gas and Power Sectors



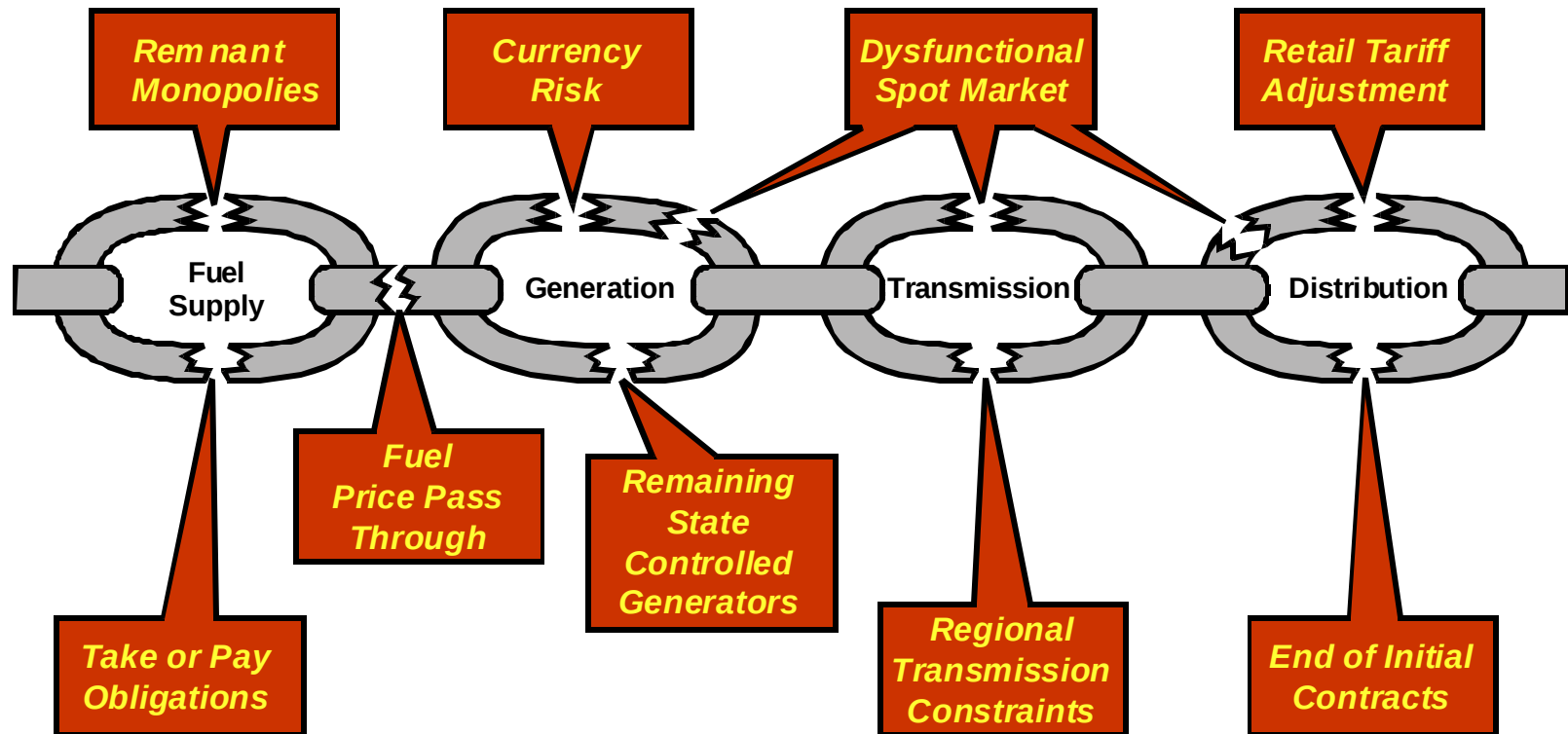
Short Term

- “Pesification” across value chain
- High uncertainty as details are worked out
- Dollar earnings hit by devaluation, price controls and economic paralysis
- Winter switch to liquid fuels a critical signpost

Longer Term

- Consolidation as players exit and merge
- Reduced investment, but reduced demand may prolong capacity overhang
- Potential ‘vicious cycle’ of creeping nationalization
- Greater focus on export opportunities

Brazil: Risks Along the Power Value Chain



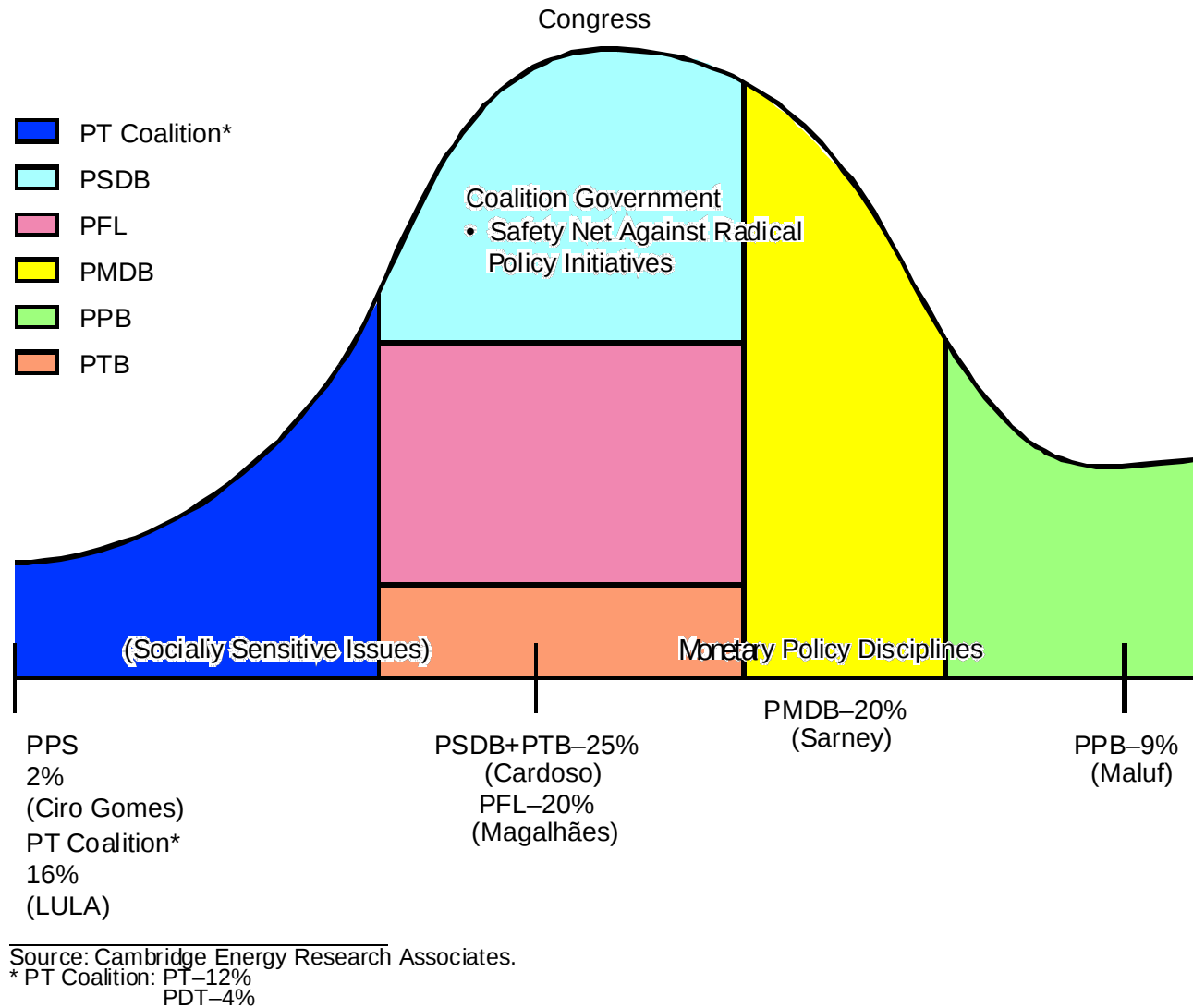
Proposed Measures to Revitalize the Sector

- **“Kick-start” the Market**
 - Revise MAE governance and place under ANEEL
 - Improve spot price calculation
- **Reinforce Market Institutions and Competition**
 - “Compulsory” free consumers
 - Limit State-Owned Companies’ potential market power
 - Enforce deverticalization and stricter limits on self dealing
- **Improve Interface between Market and Regulated Segments**
 - Unify VNs, with explicit subsidies to alternative energy sources
 - Adjust transmission tariffs to improve locational signals
- **Promote New Capacity and Supply Reliability**
 - Revise assured energies
 - Stimulate bilateral contracts
 - Create capacity reserve with capacity payments

Still Facing Many Challenges

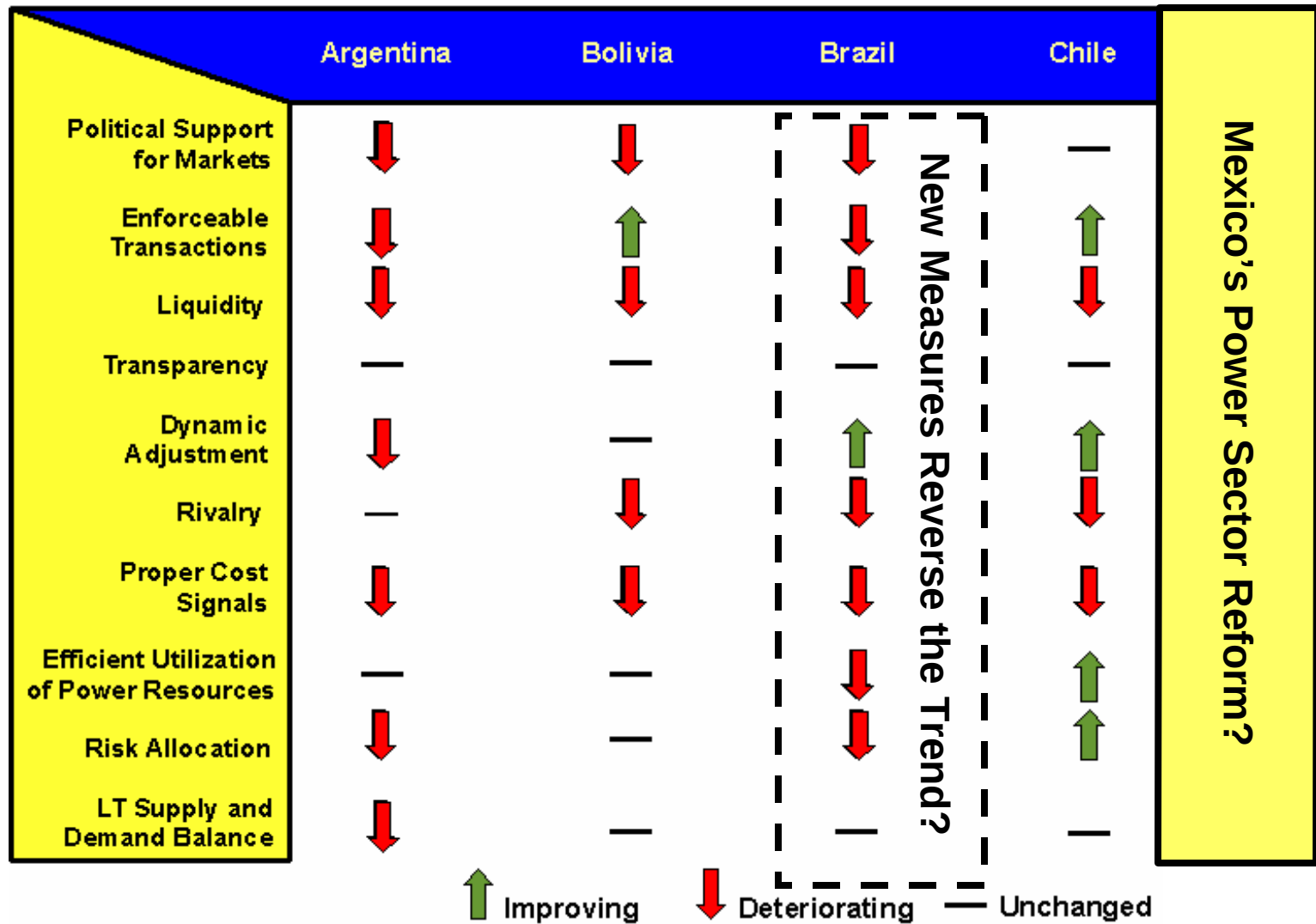
- **Details and Implementation Timeline Remain to be Determined**
 - Investors cautious so far
 - True test comes after October 2002 elections
- **Not Clear if Sufficient to Ensure Capacity Expansion**
 - Thermal power plants still face many uncertainties
 - Auctions of “old” power starting in 2003 will be critical test
- **Greater State Role May Fix Recent Problems But Could Slow Future Growth**
 - Greater potential for intervention at many levels
 - Need strong, independent regulators to balance influence of state owned companies

Brazil: Dispersion Across the Political Spectrum

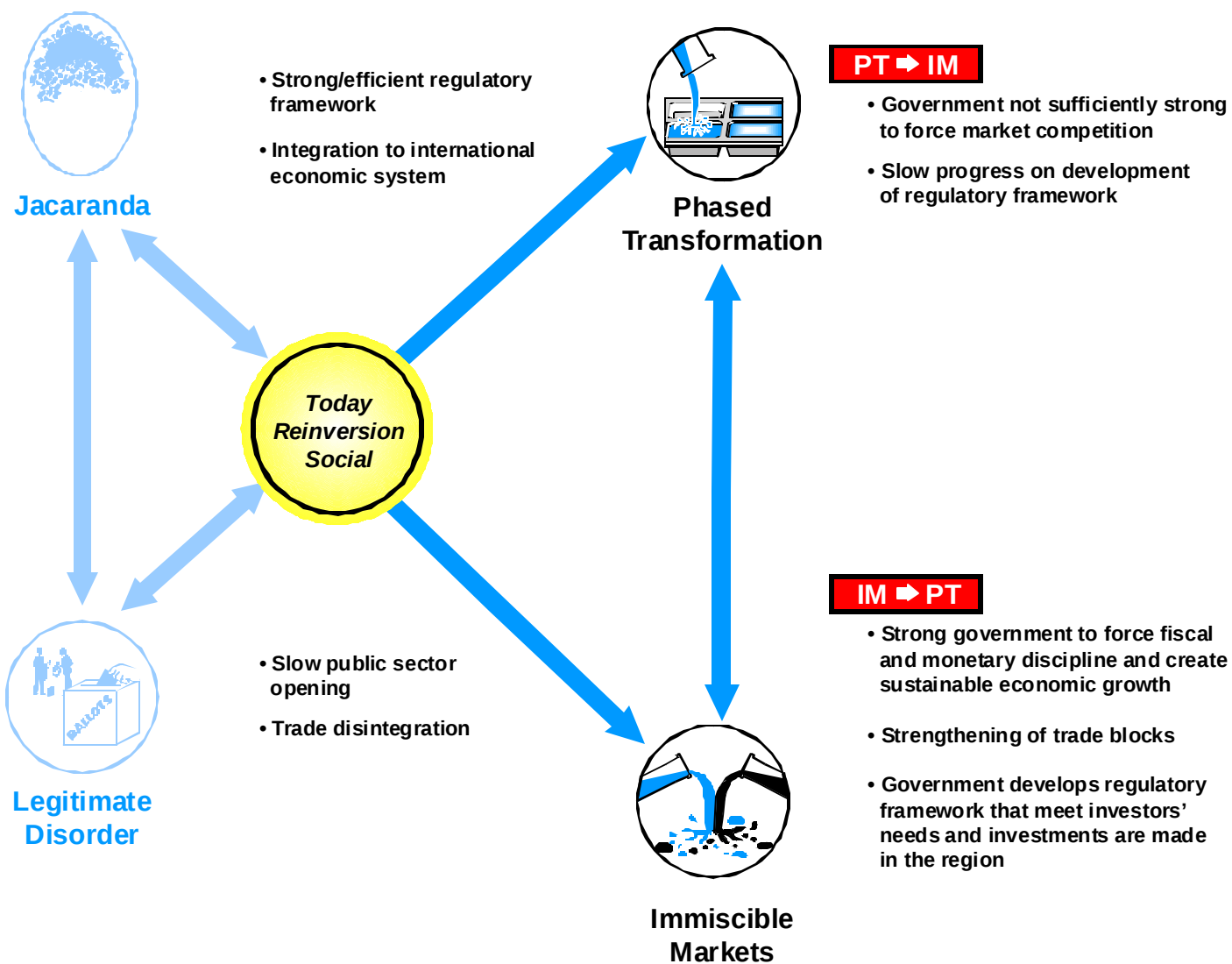


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Southern Cone Power Market Ranking: Shifting in Uncertain Times



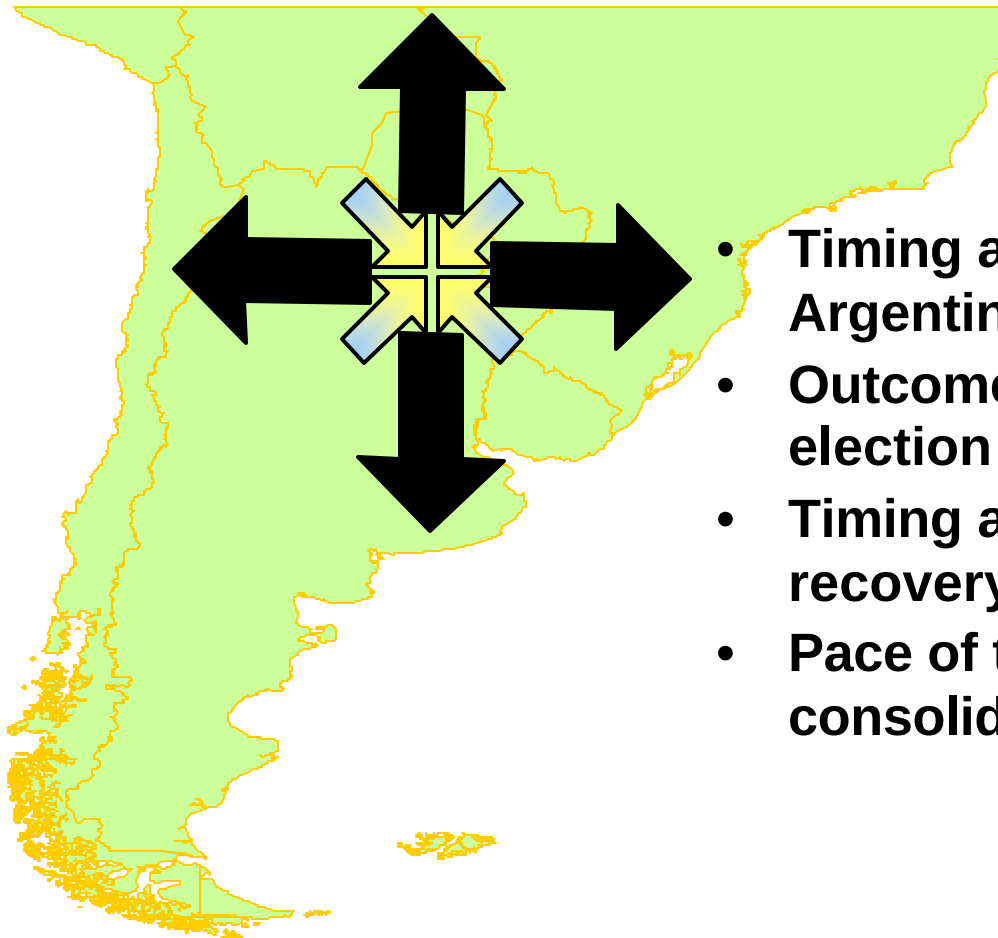
Southern Cone Scenarios: Paths to the Future



Source: Cambridge Energy Research Associates.
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Signposts for the Future



- Timing and size of IMF support for Argentina
- Outcome of Brazilian presidential election
- Timing and speed of US economic recovery
- Pace of the coming round of consolidation

**If you have any questions about this presentation or
CERA in general, please feel free to contact**

Jed Bailey

+1 800 TRY CERA

+1 617 497 6446

jbailey@cera.com



Charles Square

20 University Road

Cambridge, Massachusetts 02138, USA

www.cera.com

