



Estado y Perspectivas de la Energía Eólica en la Región

WindAR

Buenos Aires, Noviembre 2011

Marcelo Tokman Ramos

Vicepresidente Sudamérica

Vestas Wind Systems

Agenda

1 Sobre Vestas

2 Los desafíos

3 La región responde

4 El viento muestra resultados impresionantes

5 ¿Donde está Vestas en todo esto?

Sobre Vestas

In the Region, for the Region



44,500
turbines installed

67
countries

7
SBUs

23,525
Employees

8,300
mUSD revenue

40 m
CO2 saved /
year

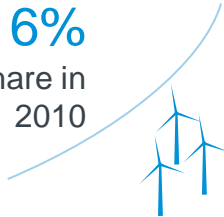
Relentlessly committed to wind

Wind, Oil and Gas

expresses the ambition of making wind an energy source on a par with fossil fuels.



16%
Market share in
2010



25%
share of acc.
Installed
capacity

A turbine for every wind type . . .



V80
2.0 MW



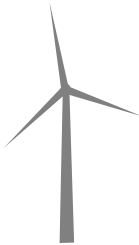
V90
3 MW



V100
1.8 MW



V112
3 MW



V164
7 MW Offshore

. . . and technology leadership

Vestas R&D and Test Centres

Industry's largest R&D and test centre

Vestas Technology

Industry's broadest support technologies range

Vestas Performance & Diagnostics

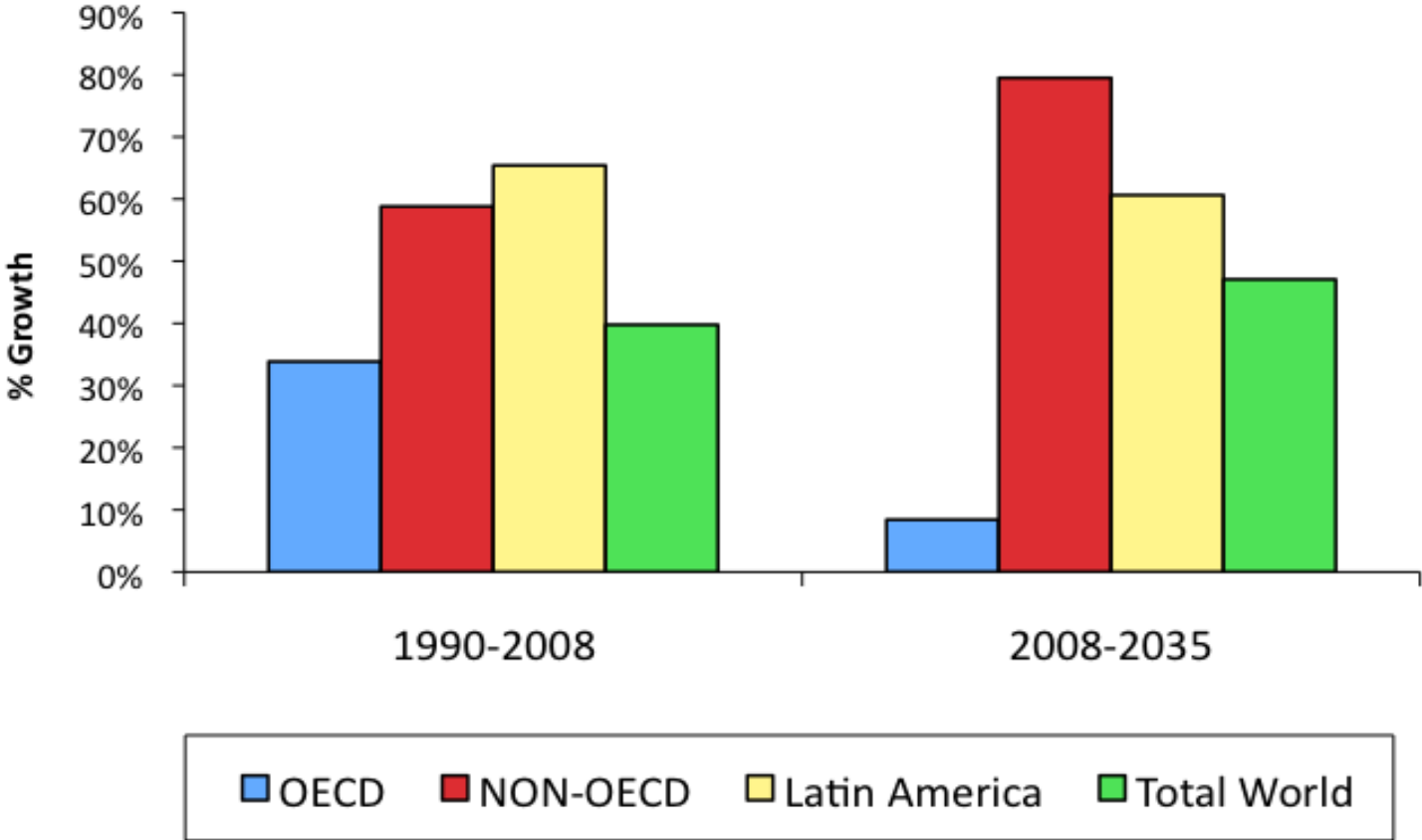
Largest set of wind turbine data (real-time 16.000 turbines corresponding to 20 % of global base)

Los desafíos

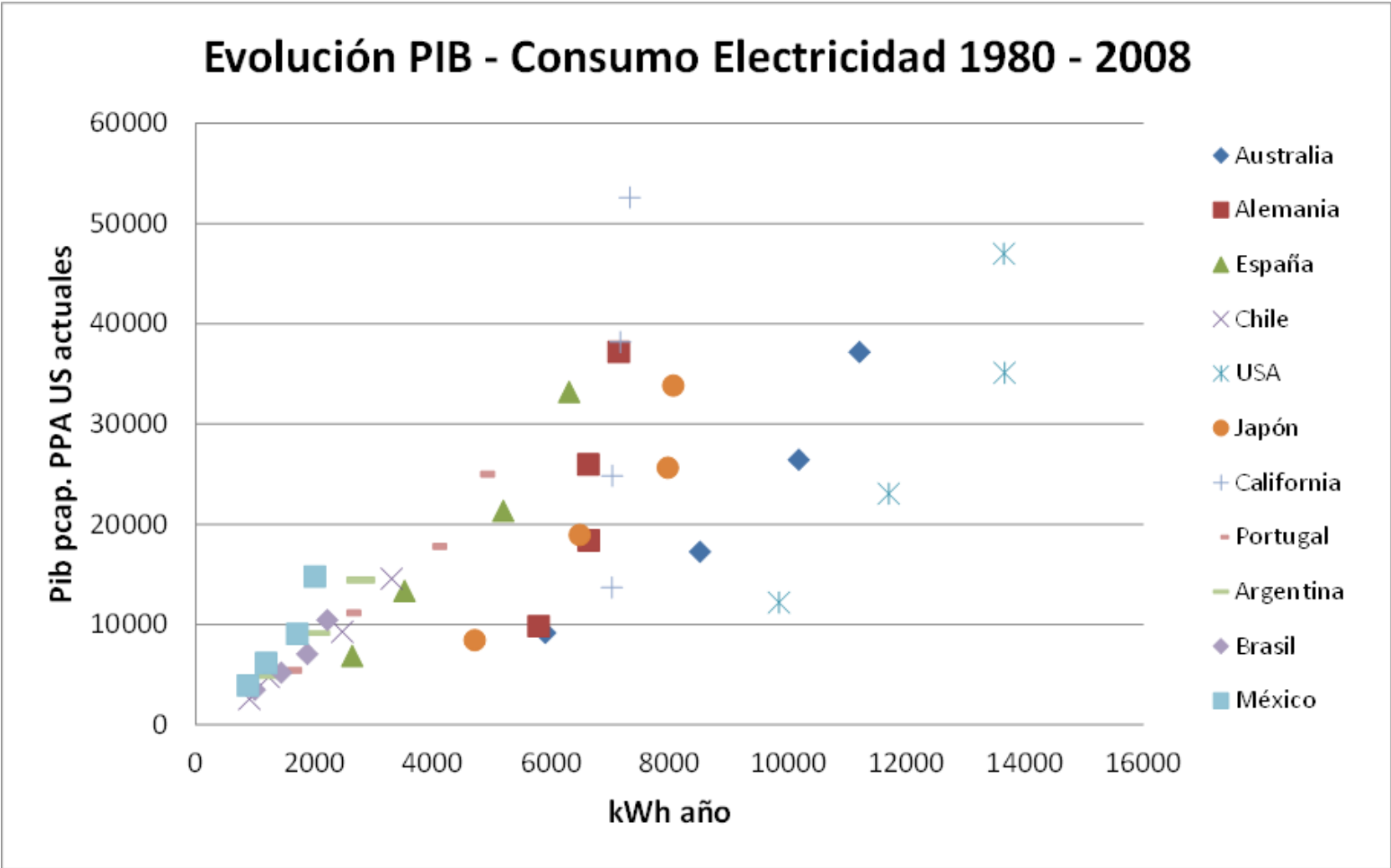


El crecimiento económico va a requerir mucha energía

Energy Demand Trends 1990 – 2035
(IEA's Current Policies Scenario)



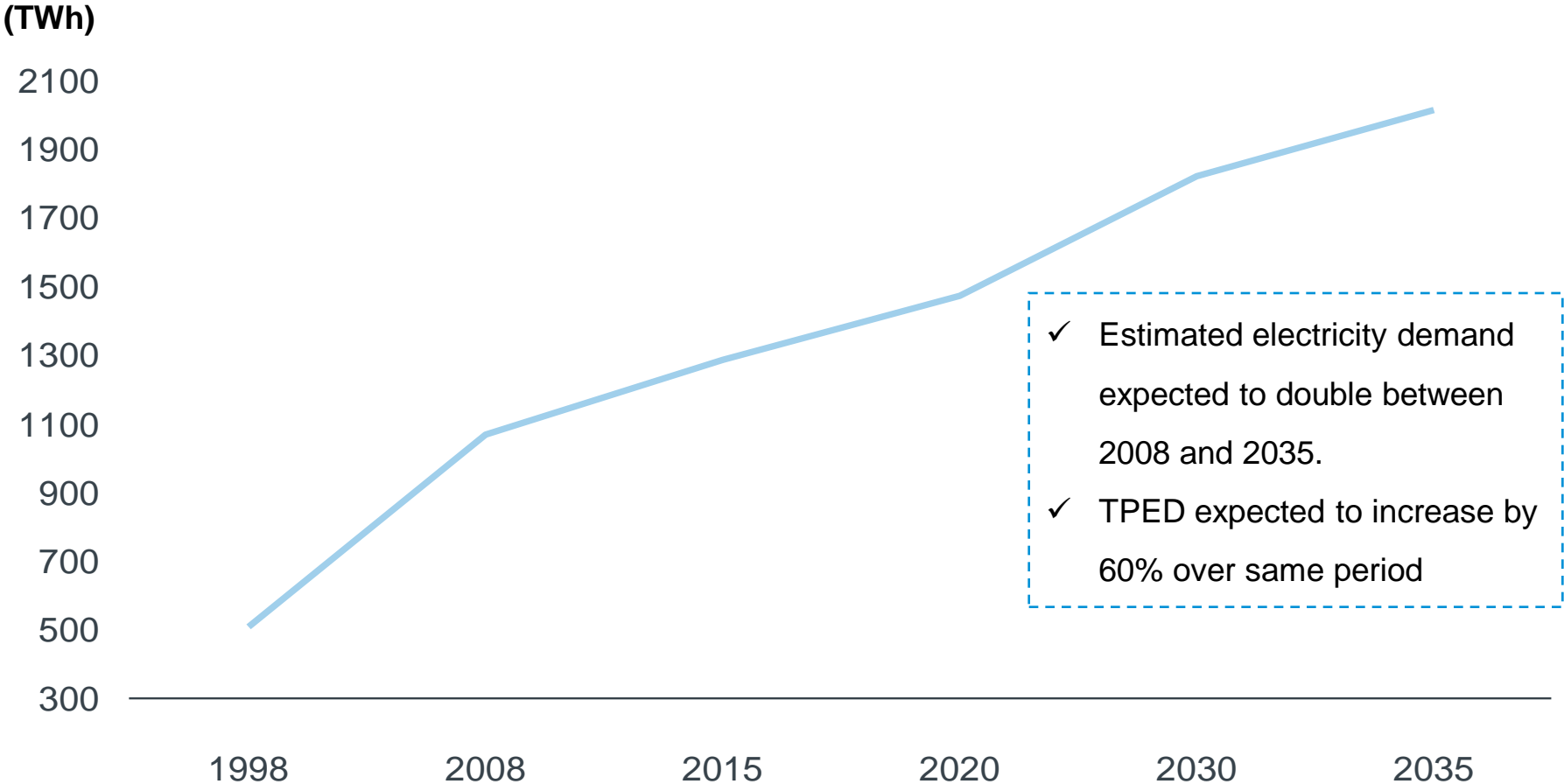
Crecimiento va a ser intensivo en electricidad (1)



Crecimiento va a ser intensivo en electricidad (2)

Total Electricity Generation

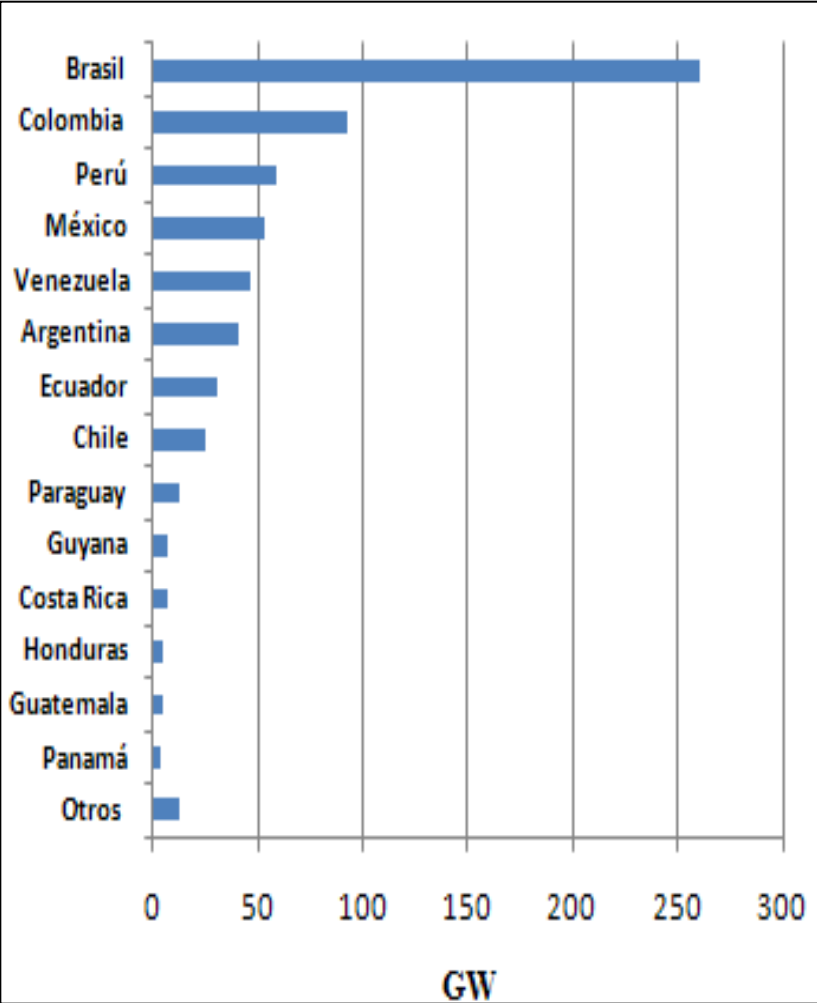
IEA's current policies scenario



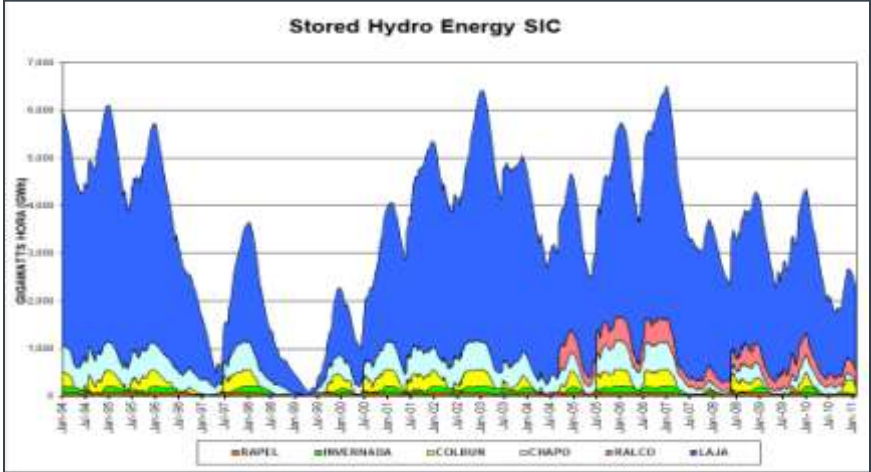
Source: International Energy Agency (IEA) 2010 World Energy Outlook

Suministro debe ser seguro (riesgo hidrológico)

Vast potential



But a risky solution

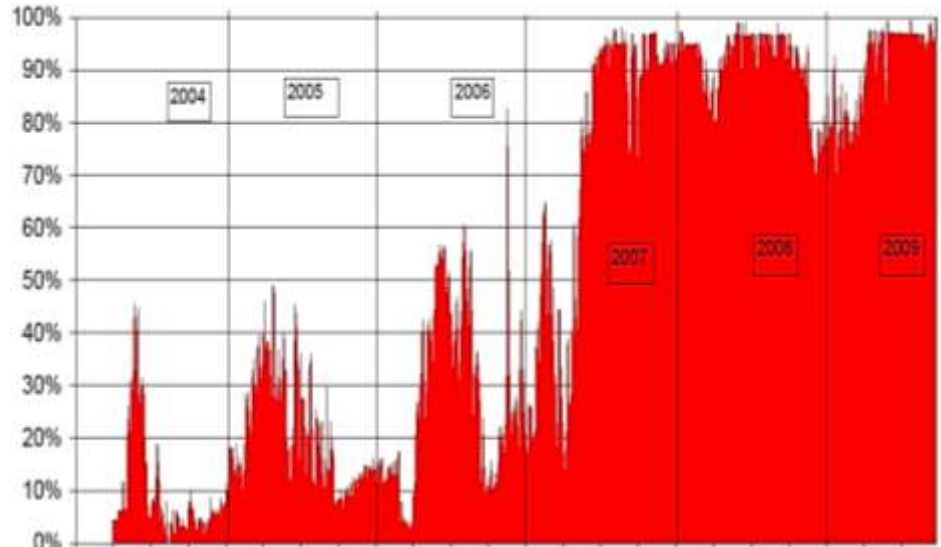


Source: SIEE-OLADE, 2010

Suministro debe ser seguro (riesgo dependencia externa)

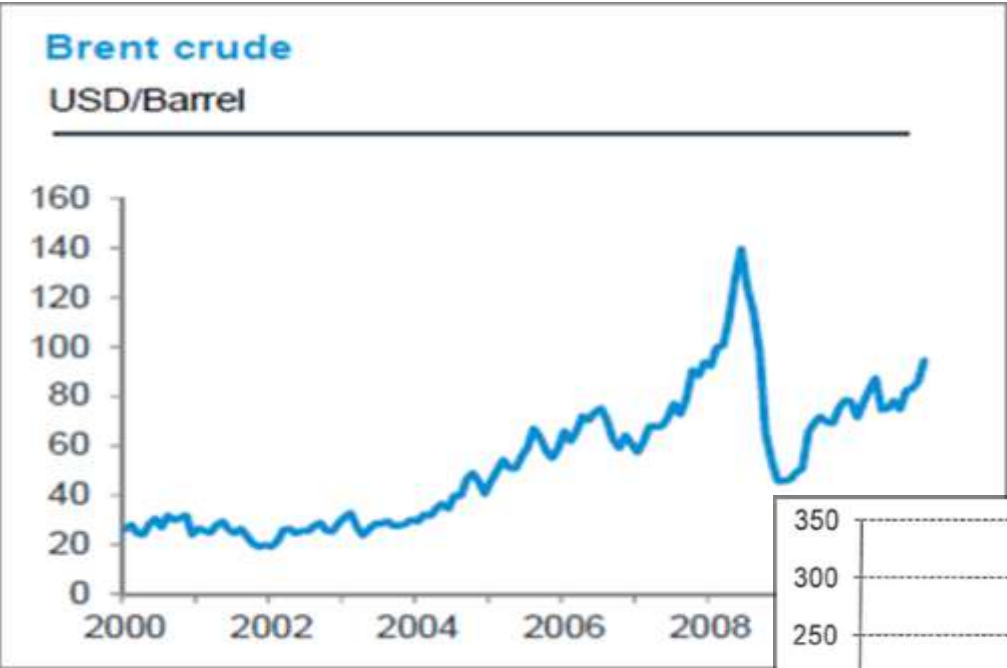
- ✓ Argentina - Chile (Gas)
- ✓ Bolivia - Brazil (Gas)
- ✓ Bolivia - Argentina (Gas)
- ✓ Argentina - Brazil (Elec.)
- ✓ Argentina - Uruguay (Elec.)
- ✓ Peru - Ecuador (Elec.)

Restrictions of natural gas from Argentina to Chile 2004 - 2008

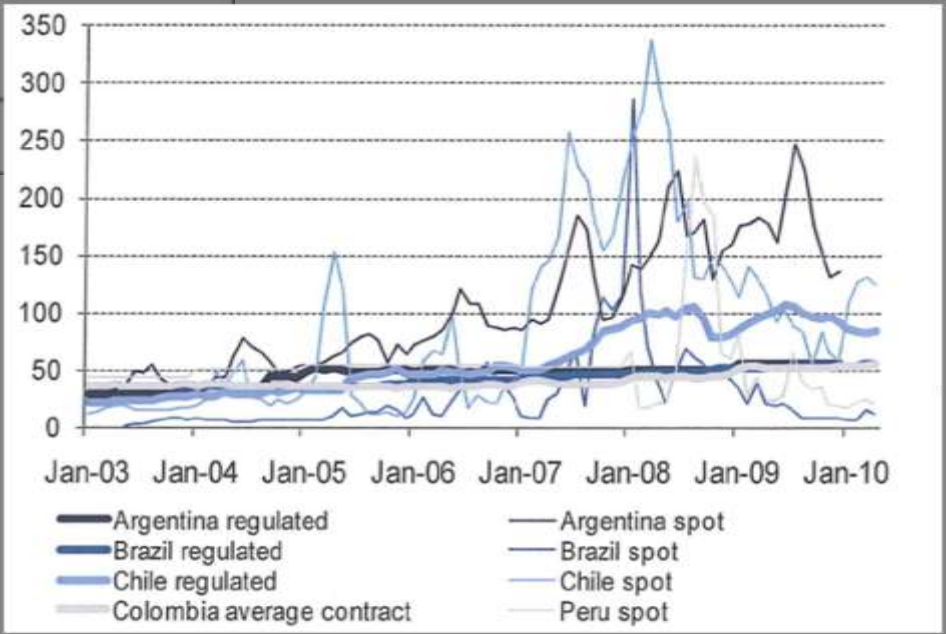


Source: Chilean National Energy Commission, 2010 (CNE)

Con precios estables y predecibles

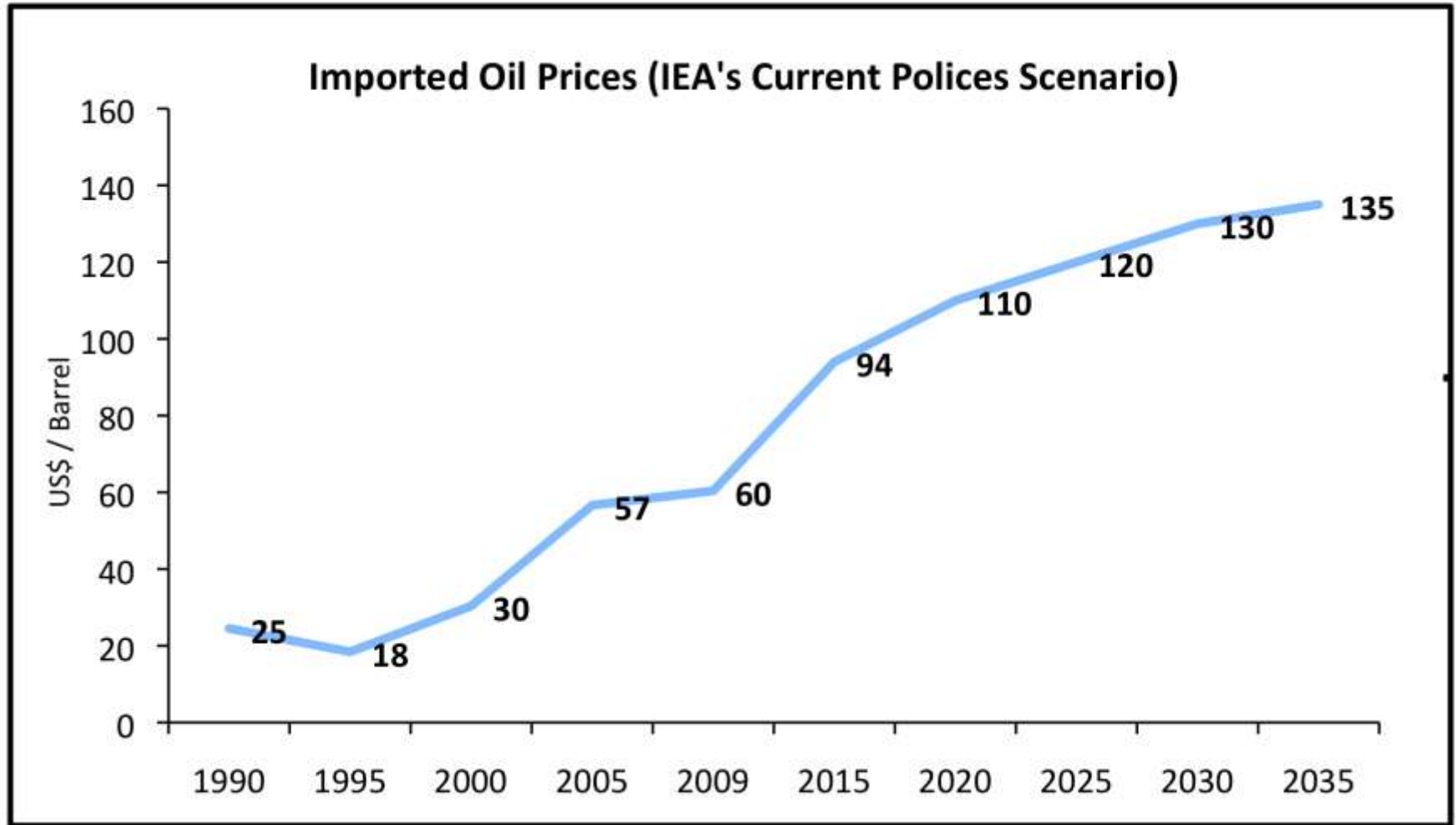


Source: Chilean Central Bank, 2010



Source: Bloomberg Energy Finance, 2010

A costos competitivos



Que sean ambientalmente y socialmente sustentables...



WASHINGTON, APRIL 13, 2009

From Page One All

Russian role cited in Kyrgyz unrest

DON'T CRY FOR ME, PATAGONIA

A woman with long term political vision would not have endangered the glaciers and water reserves of Argentina.

Find out more at www.greenpeace.org/argentina/glaciers

GREENPEACE



Angra 3 Nuclear Reactor 1.27 GW



Barrancones 540 MW Coal Plant



Belo Monte 11.2 GW Dam Project

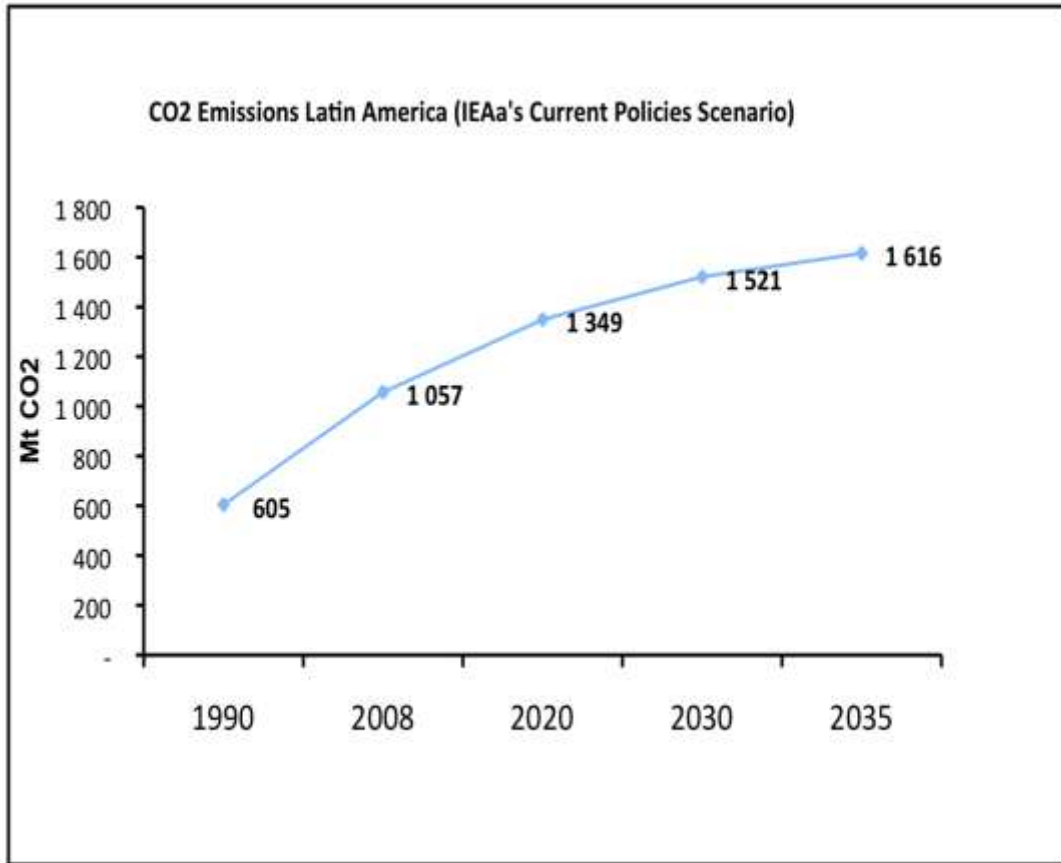


Hydro Aysen 2.3 GW Dam Project

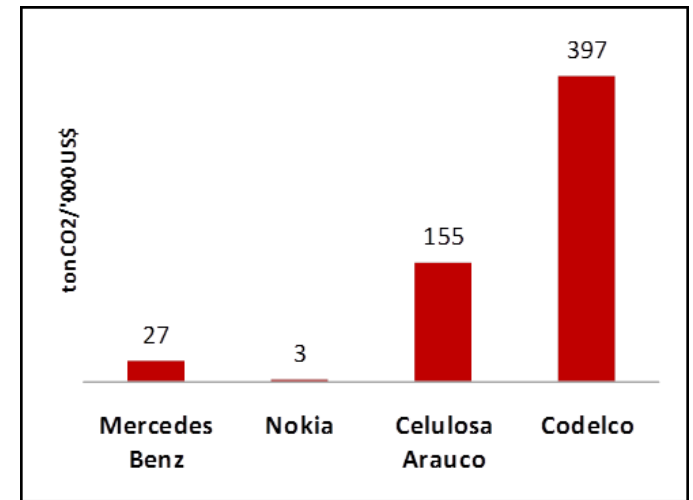
Wind. It means the world to us.™

...a nivel local y global (Cambio Climático)

Consumidores están empezando a considerar la huella de carbono en sus decisiones de compra



Carbon intensity to sales (Ton CO2/'000 USD)



¿Que busca la región?

América Latina requiere:

- ✓ Suficiente energía para seguir creciendo

Pero esta energía debe:

- ✓ Segura
- ✓ Competitiva
- ✓ Estable y con Costos Predecibles
- ✓ y Sustentable





La región responde

Diversificación por medio de la introducción de renovables

Sus virtudes

Certeza en los costos

Cada vez más competitiva

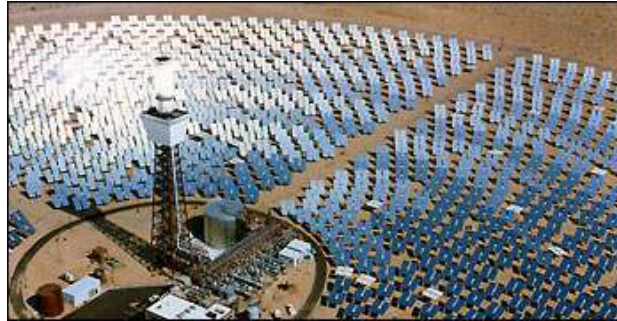
Aumenta la seguridad energética al reducir la dependencia externa

Sustentable

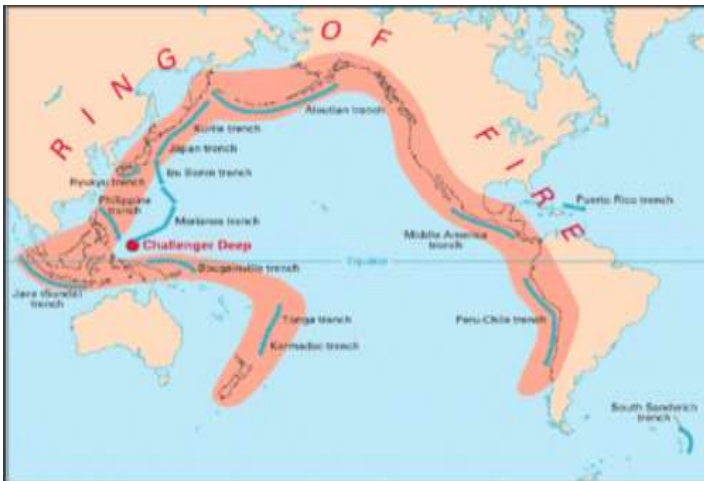
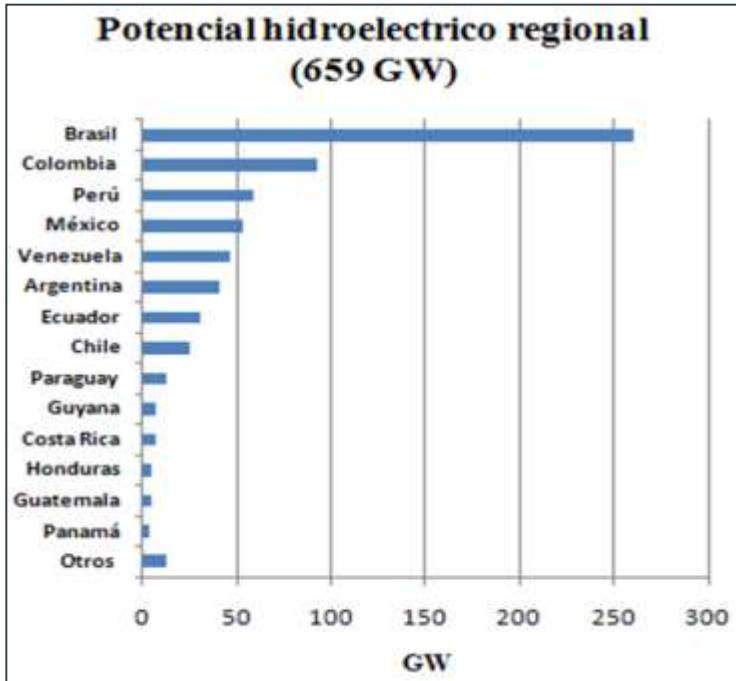
- bajo impacto local
- baja huella de carbono

Apoyo ciudadano

y ...



La región tiene gran potencial



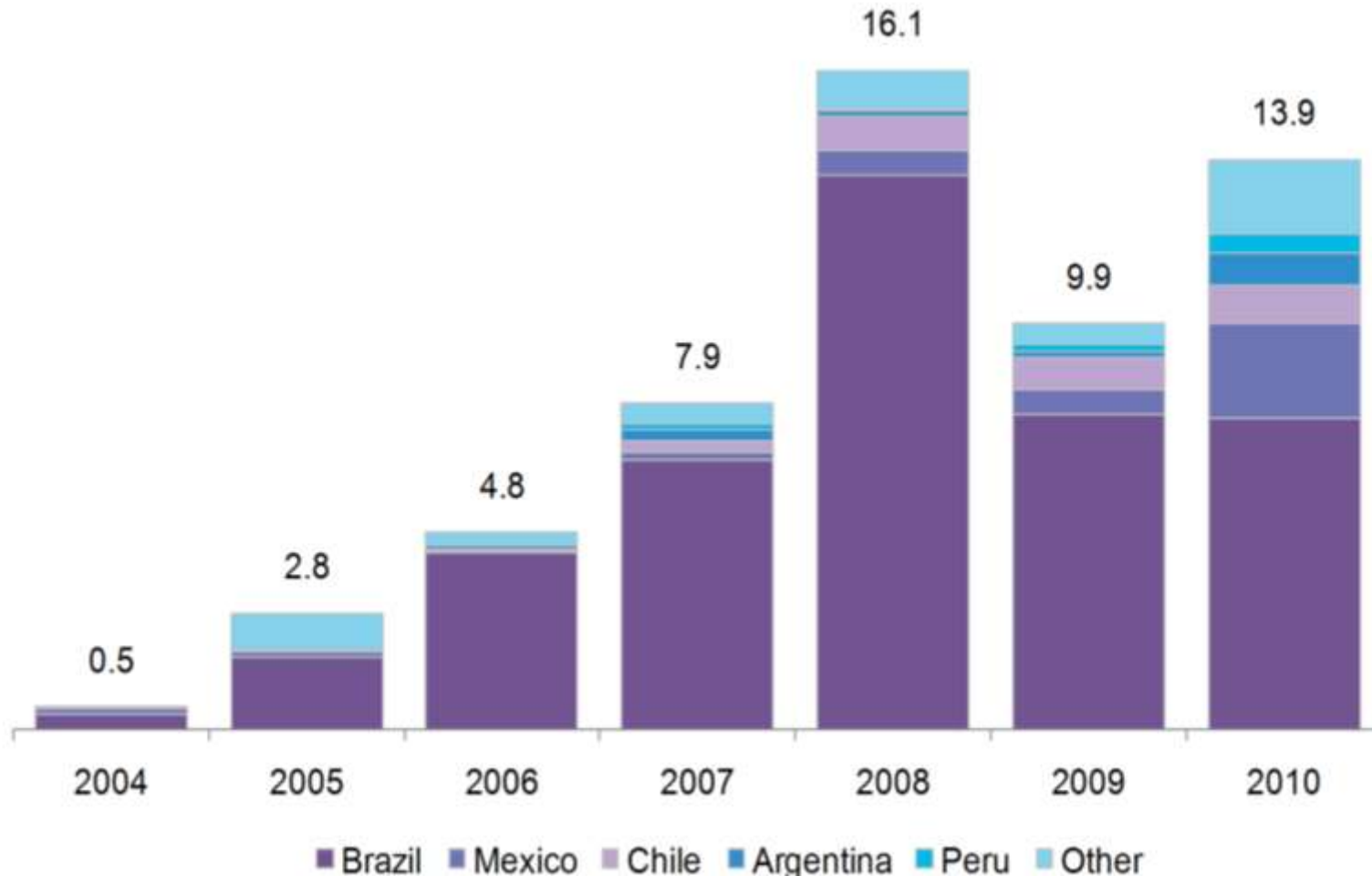
Adopción de políticas y regulaciones requeridas

Policies	Examples
National Goals	<ul style="list-style-type: none"> ✓ Brazil: Keep 80% of the electricity mix from renewables. ✓ Mexico: 2.2 GW of wind capacity by 2012. ✓ Uruguay will reach 20% wind by 2015.
RPS	<ul style="list-style-type: none"> ✓ Argentina: 8% renewables in the electricity mix by 2016. ✓ Chile: 10% Renewables by 2024.
Tenders	<ul style="list-style-type: none"> ✓ Brazil: PPAs awarded for 5 GW in two years for wind power. ✓ Argentina: PPAs awarded for 1 GW of NCRE, 754 MW went to wind power. ✓ Mexico: Plans to reach 2.2 GW by 2012 mainly through PPA auctions. And self supply projects ✓ Peru: Awarded 232 MW in PPAs for wind between 2010 and 2011. ✓ Costa Rica: Will auction PPAs for 200 MW of wind power. ✓ Uruguay: PPAs awarded for 350 MW of wind power
Feed in Tariffs	<ul style="list-style-type: none"> ✓ Ecuador: provides a FIT for renewable energy sold by an IPP to the grid (2004). Under revision. ✓ República Dominicana: provides a FIT for renewable energy (2007)
Financing	<ul style="list-style-type: none"> ✓ Brazil: BNDES provides soft loans for wind projects subject to local content. ✓ Chile: The Economic Development Agency (Corfo), provides credit lines and financial incentives for prefeasibility and feasibility studies.
Tax Incentives	<ul style="list-style-type: none"> ✓ Mexico: Allows depreciating 100% of wind farms in just one year. ✓ Peru: Allows for accelerated depreciation for renewable energy assets.
Other Support Instruments	<ul style="list-style-type: none"> ✓ Support for R&D, wind and solar resource mapping, concessions of public land, incentives for prefeasibility and feasibility studies, etc.



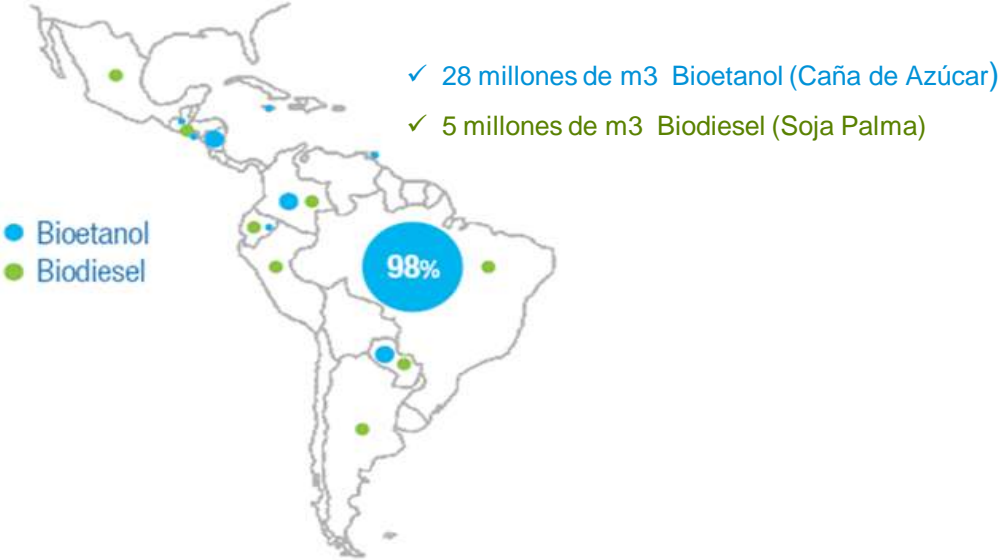
La industria muestra un fuerte crecimiento

Inversión en energía limpia por país 2004 - 2010 (US\$ billones)

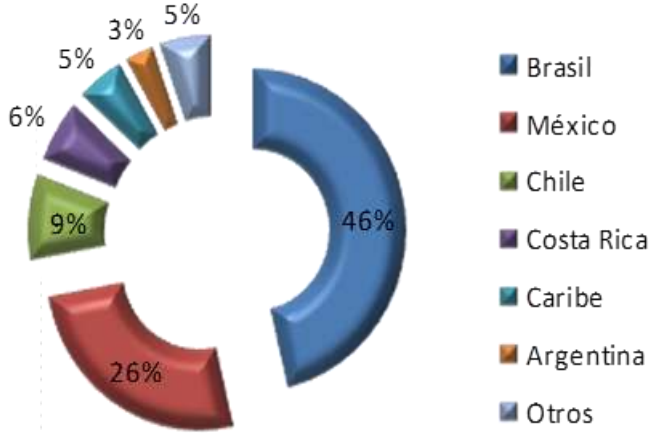


Renovables en la región (Olade 2010)

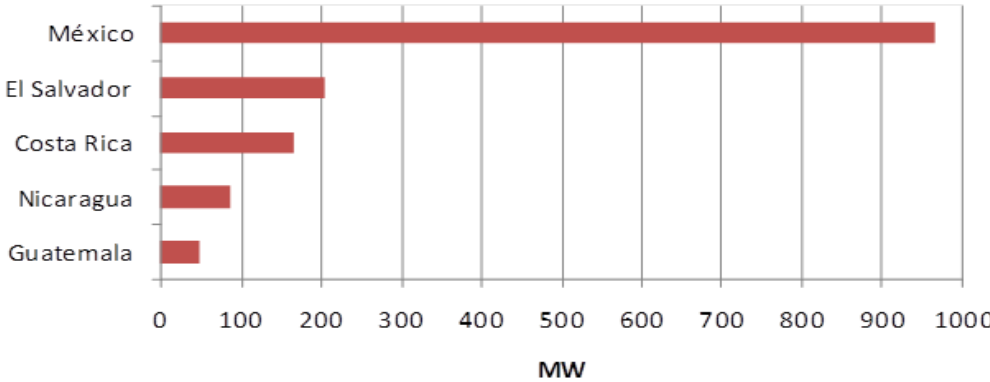
Producción de Biocombustibles, año 2010



Capacidad eólica instalada en ALC, año 2010 (2010 MW)



Capacidad instalada de generación geotérmica, año 2010 (1471 MW)



Viento: resultados impresionantes

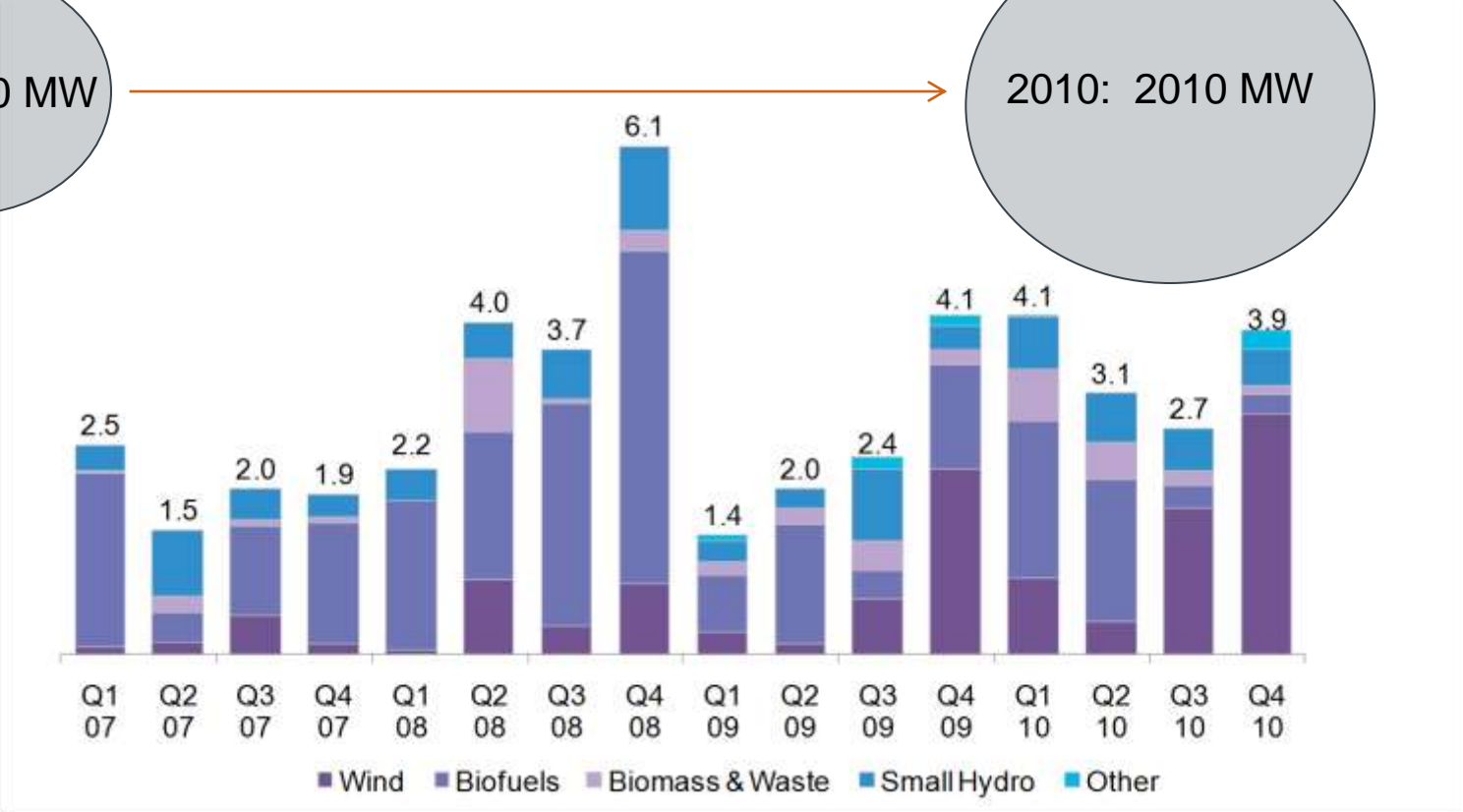


El viento ha tomado la delantera en la región...

Inversión en energía limpia por país 2007 - 2010 (US\$ billones)

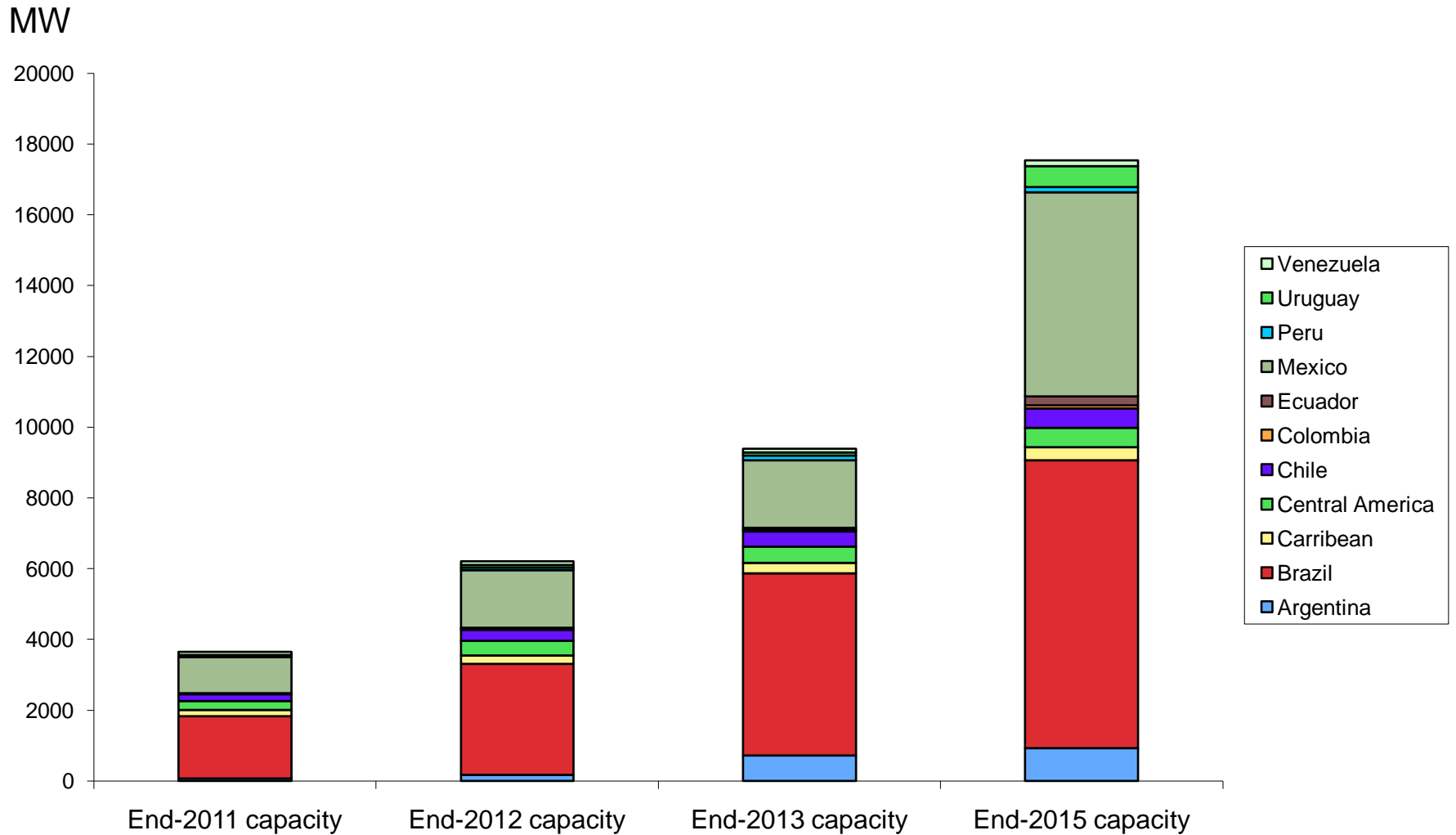
2005: 260 MW

2010: 2010 MW



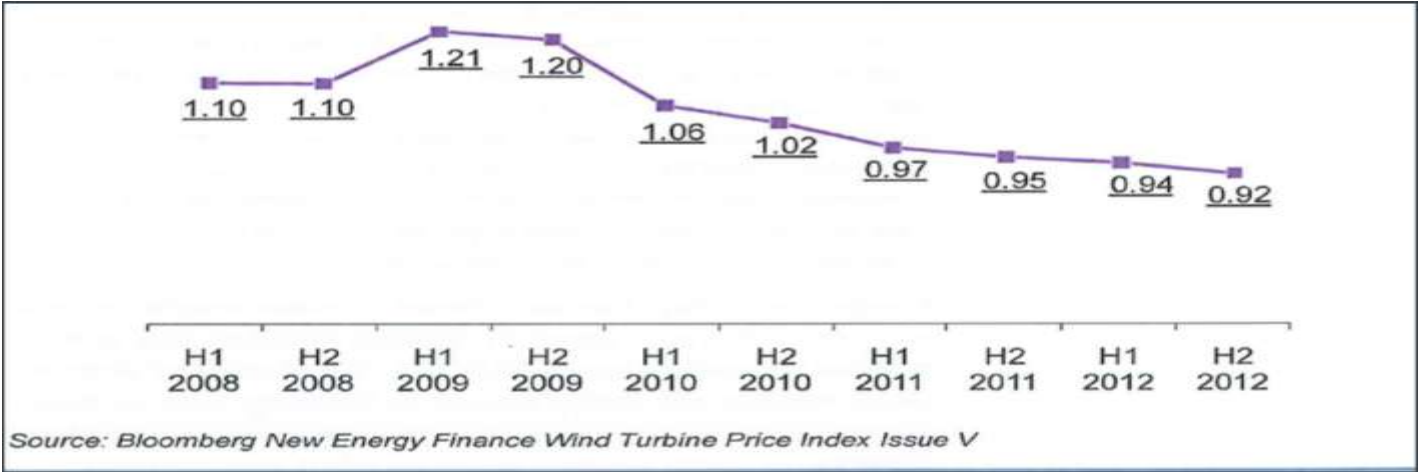
Source: Bloomberg Renewable Energy Finance (March 2011), re News Americas, 2010.

...y se espera que el crecimiento se mantenga fuerte



El viento ha demostrado su competitividad en el mundo...

Global WTPI mean price by date of delivery H1 2008 to H2 2012 (EURm/MW)



Levelized Cost of Energy Evolution for Wind (USD/MWh)



...y también en la región



¿Y donde está
Vestas en todo
esto?



Hemos estado en la región desde el principio



Vestas Argentina
In Buenos Aires since 1992



Vestas Brazil
In Sao Paulo since 2007



Vestas Chile
In Santiago de Chile since 2010



Vestas Mexico
In Mexico FD since 2010

Con resultados positivos

Hemos instalado más de 460 MW en Argentina, Aruba, Brasil, Chile, Costa Rica, Cuba, Republica Dominicana, Ecuador (Islas Galápagos), Jamaica, México, Perú and Uruguay y tenemos otros **900 MW** en construcción y pedidos.



Canela I, Chile



Antonio Moran, Argentina



Sierra de los Caracoles I, Uruguay

Rawson, el parque más grande de Argentina



- ✓ Inversión: US\$144 millones
- ✓ 80 MWs, producción anual 300 GWh
- ✓ 43 turbinas Vestas V90 1.8 MW



Wind. It means the world to us.™

Muchas gracias.

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