

Special Topics Webinar: Overview of the EU ETS and Lessons Learned for California



CLIMATE
ACTION
RESERVE

Scott Hernandez
Manager, Business Development
October 18, 2012

Agenda



CLIMATE
ACTION
RESERVE

Welcome and Opening Remarks

Scott Hernandez, Climate Action Reserve

Overview of EU ETS - Institutional Development

Simone Ruiz, IETA

Rio Tinto Experience: Competitiveness & Climate Policies

Jeffrey Hopkins, Rio Tinto

The EU Emissions Trading System: Results and Lessons for California

Alex Hanafi, Environmental Defense Fund

Derek Walker, Environmental Defense Fund

Question & Answer





IETA

INTERNATIONAL EMISSIONS
TRADING ASSOCIATION

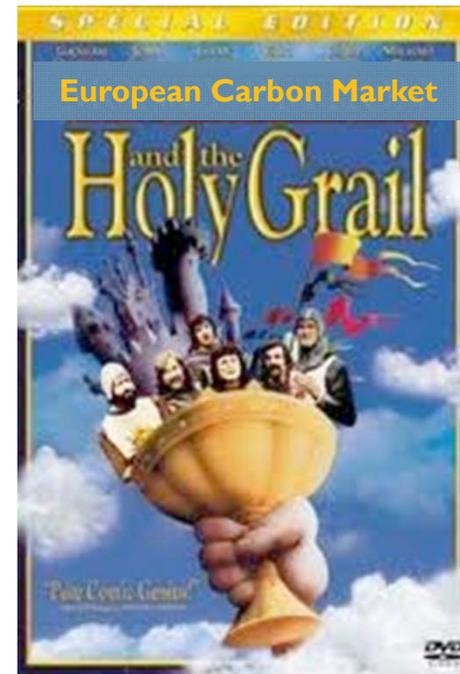
Lessons learned EU ETS

18 October 2012

Simone Ruiz – EU Policy Director – brussels@ieta.org

EU ETS built on 5 key principles

1. **Keep it open**
2. **Keep it cheap**
3. **Keep it local**
4. **Keep it fair**
5. **Keep it predictable**



??

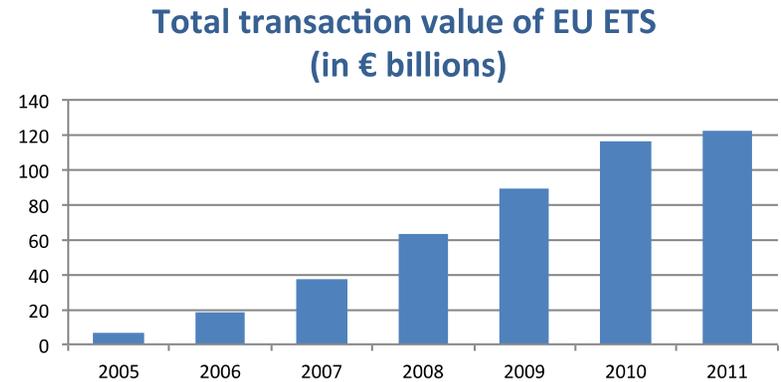
Principle I - keep it open

Rationale: liquid market key for efficient price formation

- ▶ Enshrined in ETS law: everybody can participate
- ▶ No restrictions on bidding at auctions
- ▶ No particular security requirements for registry accounts
- ▶ No financial license requirement for spot traders
- ▶ No targeted market oversight

Worked well until fraudsters discovered the market

- **Radical review of registry security since 2010**
- **Special provisions for EU auction participants**
- **Extension of financial oversight to spot market**



Source: Worldbank

Principle II - keep it cheap

Rationale: get stakeholder support for the instrument

- ▶ Enshrined in ETS law: cost-effective and economically efficient reduction in GHG emissions
- ▶ 100% free allocation on basis of historic emissions
- ▶ Access to international offsets
- ▶ Provision to prevent excessive price rises

Industry on board and broad preference for trading over tax, but windfall profits and oversupply made bad press.

- Full auctioning for power sector
- 10% most carbon efficient industry to get full free allocation
- No extension of offset limit though use possible up to 2020

Share of allocation
through auctions



Principle III - keep it local



Rationale: get government support for instrument

- ▶ 27 different ways of measuring a tonne of emissions
- ▶ 27 different ways of allocating allowances and auctioning*
- ▶ 27 different ways of running a registry
- ▶ Yet (important!) just one answer to non-compliance

Problematic as market grows and coordination becomes crucial

- Common rules for M/R and A/V
- Common benchmarks for free allocation
- Common registry and registry security rules
- Common auction platform & coordinated approach for 3 opt-out platforms (DE, UK, PL)

* Not all EU Member States auctioned allowances in phase 2.

Principle IV - keep it fair



Rationale: ensure level playing field for industry

- ▶ Carbon leakage provisions (carbon intensity & trade exposure)
- ▶ State aid rules for compensating for indirect costs (electricity price)
- ▶ 10% of allowances auctioned redistributed for solidarity and growth to certain Member States

Uncertainty if CL provisions upheld post 2020 – affects investment horizon today and state aid is for the wealthy countries (DE, NO?).

→ Not yet discussed but could involve consideration of border tax adjustments in the future.

→ Will feature prominently in next reform of EU ETS

Principle V – keep it predictable



Rationale: to reflect carbon price in investment planning

- ▶ Increasingly long compliance phases (3 years, 5 years, 8 years)
- ▶ Cap reduction trajectory has no sunset clause
- ▶ Revision of rule framework very cumbersome and no targeted change (e.g. cap adjustment) possible

Oops, we had a recession....let's re-think...supply rigidity a key factor for massive oversupply and resulting low carbon price.

- Proposal on backloading (ever heard that word before?)
- Report on functioning of carbon market
- But real reform only possible around 2015/16



IETA
INTERNATIONAL EMISSIONS
TRADING ASSOCIATION

Lessons for California

1. **Keep it open**
2. **Keep it cheap**
3. **Keep it ~~local~~ centralized**
4. **Keep it fair**
5. **Keep it predictable**
6. **Keep it simple**

**...and trust the market to discover
cost-efficient reduction options...**

Thank you for your attention!

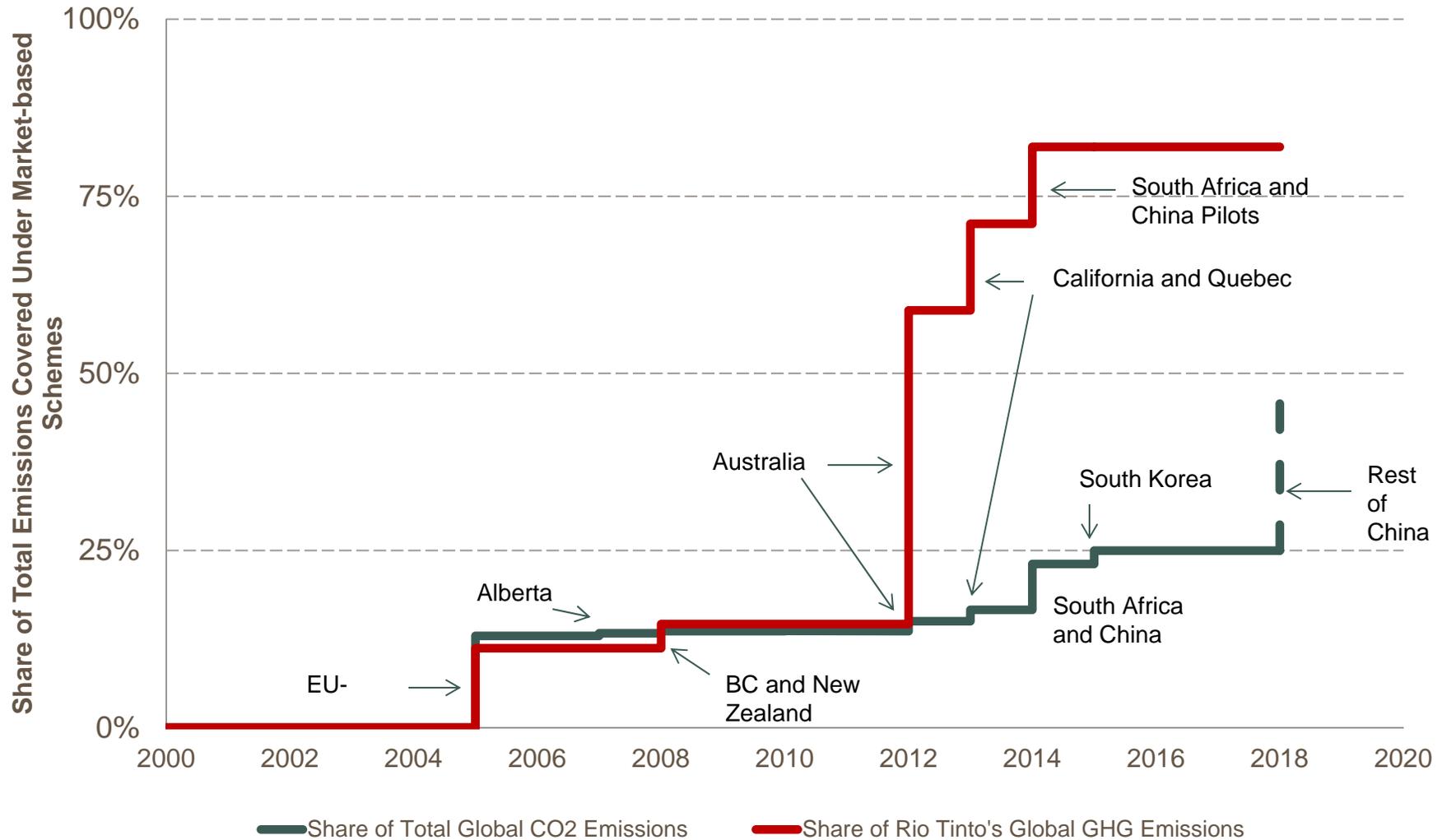
For more information & regular updates,
visit www.ieta.org

RioTinto

Competitiveness Provisions in Climate Policies

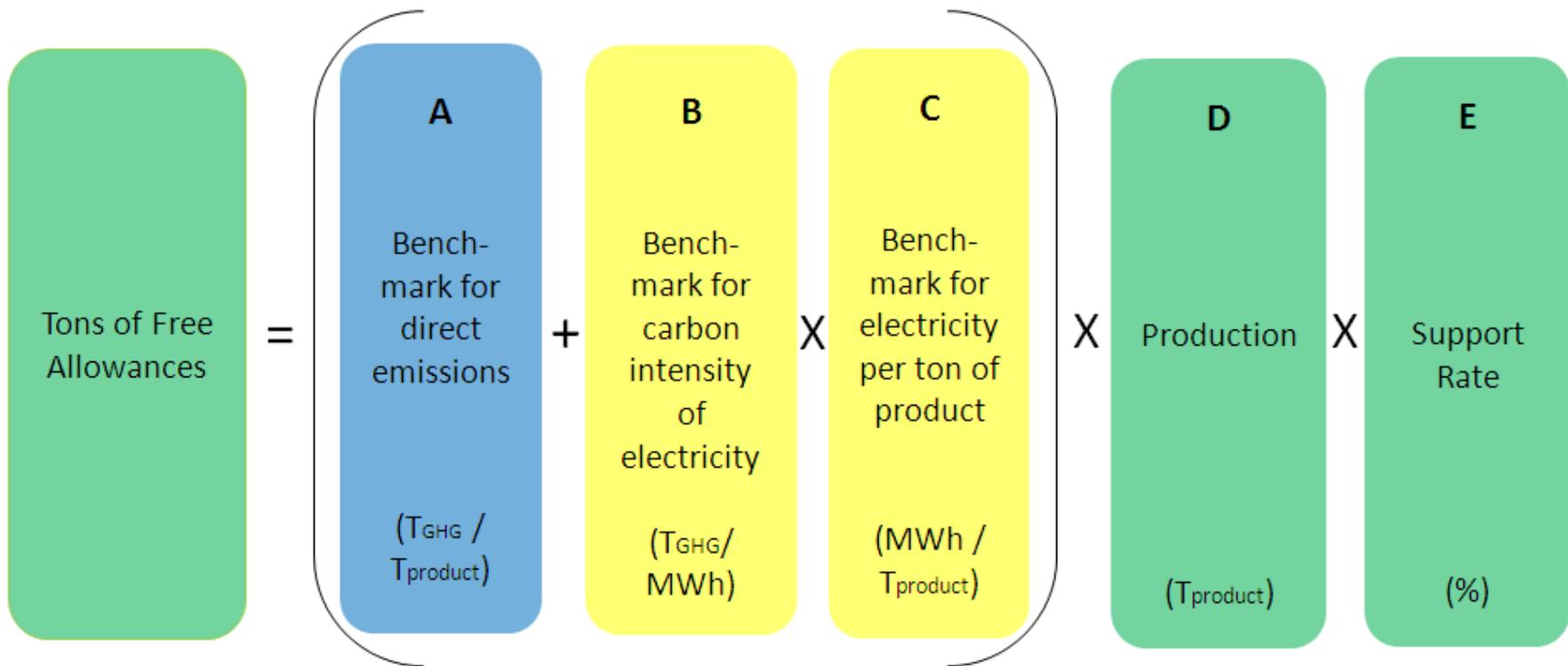
**Analysis of the EU-ETS and Lessons Learned for California
Cap and Trade
Jeff Hopkins**

Rio Tinto operations in early-mover jurisdictions compared to global emissions as a whole



RioTinto

Within cap-and-trade schemes, the targeted provisions for EITE Industry tend to take the same general form



Most jurisdictions are providing similar levels of transition assistance

Jurisdiction	A	B	C	D	E	
	Benchmark for Direct Emissions	Benchmark for carbon intensity of electricity	Benchmark for electricity per ton of production	Production	Initial Rate	Support Rate in Subsequent years
EU	Top 10% of sector	Up to 85% of weighted regional average of emissions per fossil MWh	Pending	Historical	100%	100%
New Zealand	Sector average	0.52t/MWh	Sector average	Current-year	90%* 60%	Reduced by 1.3%/year
California	Sector average	None at regulatory level, although compensation from utilities may be available		Previous 3 years	100%* 75% 50% 33%	Reduced by 1.8%/year
Australia	Sector average	1.0 t/MWh	Sector average	Previous year plus true-up	94.5%* 66%	Reduced by 1.3%/year***
Quebec	Sector average	None at Provincial level, although grid-based emissions are very low		Previous two years, with true-up	100%**	100% for fixed and combustion emissions 'Other emissions' support reduced by 1.5%/year

*For these jurisdictions, support rates are differentiated by industry sector; high rates correspond to higher expected vulnerability to leakage. Mining and metals producers usually qualify for these higher levels of support based on their energy and emissions intensity, though not always (e.g. Australian iron ore production is less emissions intensive).

**Support rates are differentiated by emissions source, with fixed emissions and combustion emissions eligible for greater levels of support than emissions that can presumably be reduced by covered entities.

*** Reduction may be limited by a floor of 90% , subject to review by the Productivity Commission.

Many of the key elements required to embed EITE within GHG regulations are found across all types

Jurisdiction	Initial Support Rate for EITE Industry	Compensation for Indirect (Scope 2) Emissions	Scheme Seeks to Maintain Full Marginal Cost Signal	Offsets Allowed for Compliance
I. Cap-and-Trade Systems				
Australia	66-94.5%	Yes*.	Yes.	Yes, domestic and international.
New Zealand	60-90%	Yes*.	No, 50% reduction.	Yes, domestic and international.
EU	100%	Yes*.	Yes.	Yes, with qualitative limitations.
California	33-100%	No*.	Yes.	Yes, domestic and international.
Quebec	100%	No, hydro-based*.	Yes.	Yes, provincial.
II. Baseline and Credit Trading Systems				
Alberta	88%	Indirectly, as scheme design limits cost impact on utilities, and hence on amount that may be passed through to customers.	No, price signal is capped at \$15/t.	Yes, provincial.
III. Carbon Tax Systems				
BC	Non-combustion process emissions are exempted.	No, hydro-based.	Yes.	Yes, being developed.
South Africa	60-100%	Yes, 60% of electricity sector emissions are exempted from the tax, reducing costs that would be passed through to customers.	Yes for direct emissions, but tax exemption for generators mutes full price signal	Yes, domestic and international.

Conclusions

- **California provisions are roughly equivalent to provisions in the EU, as well as other regions that are controlling GHGs through market-based systems.**
- **EITE competitiveness continues to be an important issue, with important precedents being established under both emissions trading and carbon tax schemes.**
- **Despite a desire and some movements towards linkage in California and Quebec and the EU and Australia, the bigger picture remains one of policy divergence rather than policy convergence.**
- **Because all market-based regimes can theoretically deliver comparable costs and emissions reductions, more attention to post-2020 policies would be helpful.**

The EU Emissions Trading System: Results and Lessons Learned

Summary and Full EDF report available at edf.org/euets

October 18, 2012

Alex Hanafi
Attorney, International Climate Program
Environmental Defense Fund
ahanafi@edf.org



The What and Why of the EU ETS

- Places strict caps on carbon dioxide emissions from power stations and industrial plants
- Applies to about 40% of the EU's total greenhouse gas emissions, rising to 43% as the ETS expands its coverage to include aviation and other new industrial sectors and global warming pollutants.
- Aims to lower the total carbon emissions of covered sectors in the EU to 21% below 2005 emissions by 2020.
- The 30 countries participating in the EU ETS account for 20% of global gross domestic product (GDP) and 17% of world energy-related CO₂ emissions.



Research Questions

- Is the EU ETS reducing greenhouse gas emissions in Europe, above and beyond the effects of the global recession?
- Is the EU ETS efficiently meeting its goals, given attention to the initial over-allocation of emissions allowances, price volatility, windfall profits, and the integrity of international carbon offsets?
- Has the EU ETS addressed its security vulnerabilities, and did these vulnerabilities affect the system's emission reductions?

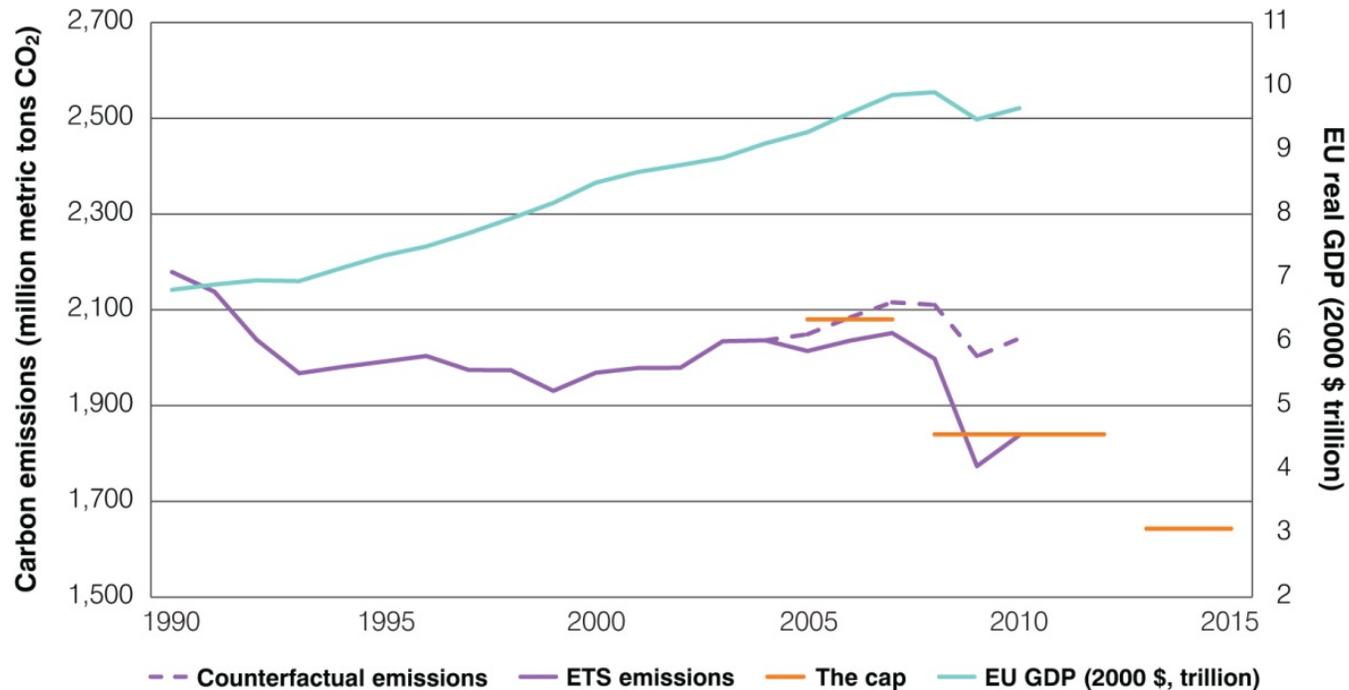


6 Key Results of the EU ETS

- 1) The EU ETS has achieved significant emission reductions at low cost, even during periods of economic growth in Europe.
 - 2) Despite over-allocation of allowances and a sharp drop in their prices during the program's pilot phase in 2005-2007, the policy stability created by longer-term targets subsequently led to durable investments in reducing emissions and deployment of low carbon strategies.
 - 3) Windfall profits occurred in some member states but can be avoided using a variety of policy tools.
 - 4) Reforms have improved the elements of the EU ETS that allow emitters to tender credits earned from projects that reduce emissions in developing countries (international "offsets"), but further reforms would be useful.
 - 5) The EU ETS has made a significant progress in preventing recurrence of tax fraud and theft of allowances from the program's early years.
 - 6) Companies and entrepreneurs have responded to the ETS and complementary policies with a range of profitable investments in low-carbon solutions.
- 

Results and Policy Recommendations

Result 1: The EU ETS has achieved significant emission reductions at low cost, even during periods of economic growth in Europe.

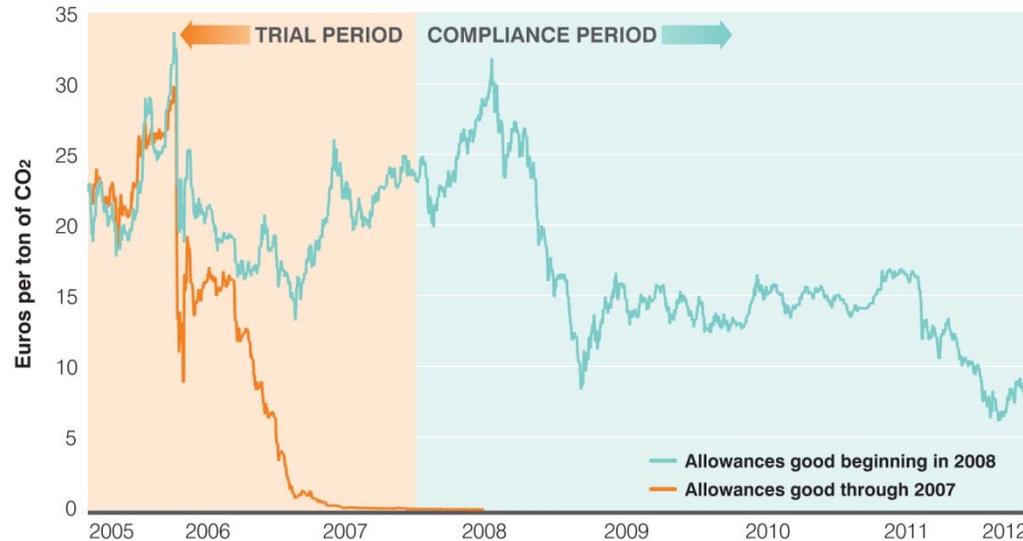


Source: GDP data: World Bank. EU emissions: A. Denny Ellerman, "The EU ETS: Path to the Future or Dead-end?" presentation, Sept. 5, 2011, available at www.dors.dk/graphics/Synkron-library/Konference%202011/Abstracts/Ellerman.pdf.

Recommendation: Stimulate long-term emission reduction investments by maintaining a predictably declining, enforceable, science-based cap on carbon.

Results and Policy Recommendations

Result 2: Despite over-allocation of allowances and a sharp drop in their prices during the program's pilot phase in 2005-2007, the policy stability created by longer-term targets subsequently led to durable investments in reducing emissions and deploying low carbon strategies.



Recommendation: Base emissions caps and resulting allowance allocations on measured and verified historical emissions, rather than on estimated or projected emissions.

Recommendation: Provide a predictable long-term policy environment that allows banking of allowances between trading periods.

Results and Policy Recommendations

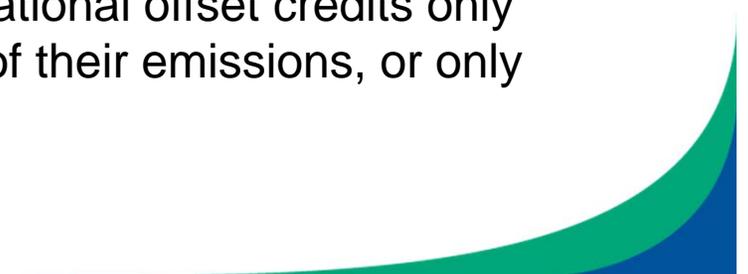
Result 3: Windfall profits occurred in some member states, but can be avoided using a variety of policy tools.

Recommendation: Establish appropriate regulatory oversight of public utilities, and auction some or all allowances.

Result 4: Reforms have improved the elements of the EU ETS that allow emitters to tender credits earned from projects that reduce emissions in developing countries (international “offsets”), but further reforms would be useful.

Recommendation: Ensure offset programs have rigorous monitoring and accounting methodologies to clarify that emission reductions are “additional” (i.e., below a credible baseline)

Recommendation: Adopt reforms that allow international offset credits only from jurisdictions that have capped some portion of their emissions, or only from least-developed countries.



Results and Policy Recommendations

Result 5: The EU ETS has made significant progress in preventing recurrence of tax fraud and theft of allowances.

Recommendation: Establish effective governance and regulatory bodies, as well as preventive electronic security systems, to adapt to evolving cyber attacks and other market security threats.

Result 6: Companies and entrepreneurs have responded to the ETS and its complementary policies with a diverse range of profitable investments in low-carbon solutions.

Recommendation: Institute an ambitious cap-and-trade system to encourage business to think creatively about reducing greenhouse gas emissions.



Key Takeaways

- World's first large-scale CO₂ cap-and-trade system
- Maturing, while also reducing emissions and decarbonizing EU economy
- Offers a unique opportunity for the **18 other** regions, nations, states, and local jurisdictions currently implementing or considering carbon-trading systems to learn from its experience and continue to build on its success
- Illustrates benefit of starting early, evaluating results, and increasing ambition over time
 - Design flaws and weaknesses of various policy tools are often difficult to anticipate, and can be corrected over time
 - Practical experience provides a litmus test

Summary and full EDF report available at edf.org/euets





Courtesy German Wind Energy Association/© BWE / Thorsten Paulsen

Alex Hanafi
ahanafi@edf.org



EU ETS: Lessons for California

Derek Walker
October 18, 2012



California is positioned to build on its legacy of reducing energy use while growing GDP...



PER CAPITA ELECTRICITY CONSUMPTION VS. PER CAPITA GROSS DOMESTIC PRODUCT

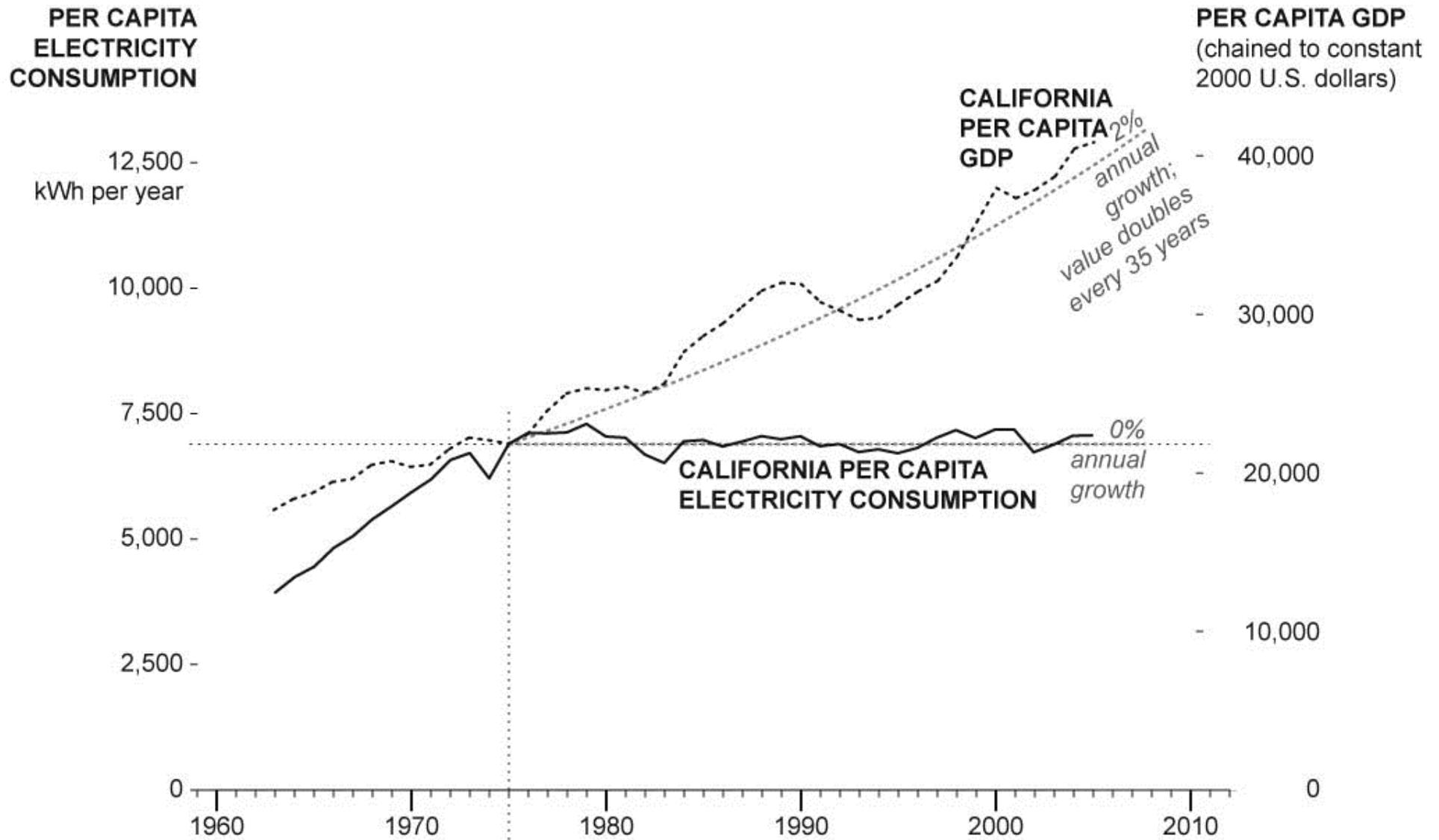


FIGURE 1.4 Source: EDF Report, 2009

**California's Legacy
+
EU ETS Experience**



Key Lessons California Has Applied from the EU ETS

- Setting the cap
- Windfall Profits
- Offsets
- Price Certainty



Setting the Cap

- From the outset, California's cap and allowance allocations will be based on actual measured emissions, using data going back to 2008.
- Recommendation: Ensure that any jurisdictions linking into California's program also base their cap on verified, historical data.



Windfall Profits

- California will initially provide most allowances to industry for free, moving to a partial auction system based on trade exposure and energy efficiency in the second compliance period. In the electricity sector, providers will be given allowances for free but will be required to sell them at auction and return most of the proceeds to rate payers.
- Recommendation: Monitor hybrid allocation-auction strategy to ensure a balance between business and consumer interests.



Offsets

- California has adopted official protocols (rather than taking a project-by-project approval approach) to guide crediting offsets within designated domestic sectors and requires independent verification of emissions reductions.
- Recommendation: Approve international offset activities only from jurisdictions with firm restrictions (“caps”) on GHG emissions.



Price Stability

- California's suite of cost stabilizing tools such as allowance banking, some free allocation, and an allowance reserve, held back in case prices exceed a certain value, will combine to keep carbon prices more stable.
- Recommendation: Carefully monitor the market for unusual price fluctuations or needed adjustments.





Derek Walker
dbwalker@edf.org
415-293-6065





CLIMATE
ACTION
RESERVE

QUESTIONS?

