

Chapter 12

Analytic Findings

12.A. The WCI initiative:

- The WCI initiative identifies a target reduction of aggregate GHG emissions of 15 percent below 2005 levels by 2020.
- The WCI recommends a broad cap-and-trade program as part of a comprehensive regional effort to reduce GHG emissions and achieve the WCI 2020 regional goal.
- The WCI is developing a plan that identifies and prioritizes those items and developing a schedule for their completion.
- Mandatory measurement and monitoring for GHG emissions will commence in January 2010, reporting of 2010 emissions will begin in early 2011, the cap-and-trade program will launch January 1, 2012, and each jurisdiction will enforce compliance.
- The WCI study examined three scenarios: a Reference Case, Cap-and-Trade Policy Cases, and the Sensitivity Cases
- The study concluded that the jurisdictions can meet the regional emissions reduction goals by 2020 with a small overall savings due to reduced energy expenditures exceeding the direct costs of GHG emission reductions.

12.B. Assessment of the WCI analysis

The economic analysis conducted by WCI is inconsistent, contradictory, based on questionable assumptions, and unpersuasive:

- The WCI initiative did not estimate economic impacts at the state or provincial level; rather the plan calls for each of the jurisdictions to take the outputs of the current effort and to use them as input to partner-level economic models. This represents a serious deficiency in the analysis.
- Physical outputs and fuel prices are forecast, but published versions of the output are at the eight-partner level and not available for each jurisdiction. In addition, three more Canadian provinces have to be added to the analysis. Thus, at best, the analysis is still incomplete.
- The WCI targets continue to change and sensitivity needs to be built into the cases to account for major economic changes.
- The WCI cap-and-trade scenarios place a cap on power sector activities throughout the WECC and include an accounting for imported power and emissions, but it is not clear that this can be monitored correctly and accurately.
- Half of the GHG reductions are forecast to come from the "Complimentary Policies" that are supposed to be instituted. However, in addition to questions about the feasibility and effectiveness of these policies, there is a potential modeling measurement problem when all three are modeled simultaneously.
- A number of choices were made during the modeling effort that either make no sense or are not in the project budget.
- There are numerous problems with the design of the WCI project itself, and many derive from the limited

size and non-contiguous nature of the Partner jurisdictions.

- The most important analysis required before implementation concerns the economic impacts on the state, provincial, and local regions. The WCI project is seriously deficient in that it fails to adequately forecast and analyze these impacts.
- Further, the WCI is not planning to estimate these impacts on many critical economic indicators such as jobs, employment, unemployment rate, personal income, disposable personal income, taxes, revenues, consumer and wholesale prices, etc.
- Each Partner is supposed to estimate those impacts within their own boundaries, and this will show that the states and provinces will suffer severe impacts from a cap-and-trade system. However, the timing, consistency, and accuracy of these disparate modeling efforts are open to serious doubt.
- Numerous studies have found that the impact on the U.S. economy of mandatory GHG emissions controls at the national level will be significant and that the impact on specific states and Provinces of the imposition of unilateral GHG emissions controls may be even more significant. The WCI does not address this issue.
- Residents in the WCI states and Provinces are likely to face increased costs for energy, utilities, and for other goods and services and may experience an increased cost of living, beginning in 2010, but this is not reflected in the WCI analysis.
- There is a strong relationship between business energy costs in a state and that state's rate of economic growth and job creation, and states with lower business energy costs tend to grow more rapidly and to create more jobs than those with higher business energy costs. However, this is not reflected in the WCI analysis.

- It is not realistic to assume that the West can install in 10 years the amount of wind and solar generating capacity projected by WCI, and the WCI electricity transition scenario is, at best, unrealistic.
- The WCI would establish a bureaucracy to set a cap for emissions and then monitor the CO₂ emissions of every company, and would trigger a huge amount of influence-peddling,
- The laws, regulations, mandates, and bureaucracy the WCI go so far as to give WCI climate officials authority over even private company organization and reorganization.

A cautionary experience is available from Europe's ongoing efforts to impose a cap and trade program under the Kyoto Protocol. However, European efforts have incurred significant costs while failing to reduce emissions.

WCI seems to envision a “free lunch,” GHG emissions will be significantly reduced with positive impacts on the jurisdictions’ economy and jobs. However, this is open to serious doubt, as numerous studies of GHG control and cap-and-trade programs have found:

- CO₂ is the unavoidable byproduct of fossil fuel combustion, which currently provides 85 percent of U.S. energy, and it will be very costly to try to replace this preferred energy source -- especially as rapidly as the WCI requires.
- In addition to directly harming consumers, the high energy prices that would likely result from the WCI could seriously affect the production side of the West’s economy.
- Contrary to the claims of an economic stimulus from "green investment" and "green-collar" job creation, the WCI would likely retard economic growth, GDP, and job creation.

12.C. Disparate impact on low-income households and minorities

- Rising energy prices especially hurt low-income families because they must devote a much higher share of income to energy and, since minority families tend to be among low-income households, they are disproportionately burdened by rising energy prices.
- The WCI is advocating cap-and-trade schemes and renewable energy mandates that could exacerbate this economic disparity by raising energy prices, and it ignores options that would lower energy prices and safeguard the welfare of low-income families.
- When families with income constraints are faced with rising costs of energy, they must choose between paying for that energy use and other necessities such as food, housing, or health care.
- Energy costs are extremely regressive, and increased energy costs have further encroached upon the already-strained resources of the lowest-income households.
- Rising energy costs inflict greater harm on minority families: Lower-income families are forced to allocate larger shares of the family budget for energy expenditures and minority families are more likely to be found among the lower-income brackets.
- This disparity between racial groups means that rising energy costs have a disproportionately negative effect on the ability of minority families to acquire necessities -- food, childcare, and healthcare.
- Essentially, rising energy costs have the effect of a discriminatory tax based on race.

12.D. Lack of Beneficial Impacts On Climate

- The WCI plan details absolute reductions by the year 2020 of 383 MMTCO₂-eq from Arizona, British Columbia, California, New Mexico, Oregon, and Washington combined.
- However, the scientific assumptions and formula of the IPCC shows that the WCI plan, if extended until about the year 2100, would deliver a temperature decrease benefit of one ten-thousandth of a degree Celsius. This extremely small number is not measurable with any accuracy as a change of average global temperatures.
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- Thus, the WCI plan would provide no measurable benefit over the next century in terms of reducing anticipated increases in average temperature.

12.E. Dangers of Reducing Fuel Diversity

There are three demands that must be met by any large-scale electrical power system: High reliability, low cost, and minimal environmental impact.

The WCI's model assumes that the West will minimize the use of reliable, base load electric power generators (coal and nuclear) not only goes against worldwide experience in large power systems, but at high levels of intermittency, the approach is not viable operationally. Wind, PVs, and solar thermal are intermittent and inherently unreliable and cannot provide a viable grid backbone, which means inherently unreliable power delivery. Furthermore, if the western states were to utilize existing hydro capacity for electric energy storage for intermittent power sources, related hydroelectric generators would be taken out of the reliable generation mix and would have to be compensated for by new power generators. In periods of drought when hydro capacity is reduced, such a system could become inoperable.

Diversity of electric power sources is important and a significant backbone of base load generators is essential, not only for reliability but also to ensure reasonable costs to industrial and other consumers.

12.F. Inadequacy of Renewables

The WCI report projects that most of the West's increased energy requirements through 2020 can be met with ethanol, wind, other renewables (excluding hydro), and energy efficiency/demand response. This is highly questionable:

- RE produced about seven percent of total U.S. energy in 2007, and 90 percent of that contribution was primarily hydroelectricity and industrial by-product biomass.
- EIA forecasts that by 2030, renewable energy will produce about 11 percent of U.S. energy requirements. However, most of this renewable energy contribution will consist of the traditional renewable energy sources of hydro (22 percent) and industrial by-product biomass (60 percent).
- Even in 2030, wind, photovoltaics, solar thermal, and all other renewable energy technologies will contribute only about two percent of total U.S. energy requirements.
- In sum, according to EIA, renewables will remain a niche application and thus the West – and the U.S. -- cannot rely on renewables for its energy future.