

# NATIONAL WIND COORDINATING COMMITTEE

## BACKGROUND TO “CONSENSUS NWCC CREDIT TRADING OPPORTUNITIES AND GUIDELINES”

*Consensus NWCC Credit Trading Opportunities and Guidelines is part of a larger NWCC publication Credit Trading and Wind Energy: Issues and Opportunities. This introduction provides organizational and substantive background for the stand-alone Consensus NWCC Credit Trading Opportunities and Guidelines.*

*The extensive NWCC Report, Credit Trading and Wind Energy: Issues and Opportunities is being released as an NWCC Resource Document for educational and informational purposes. The document has been reviewed and approved by an NWCC working group with relevant experience, but, by choice of the NWCC has not been carried through the full NWCC consensus process. Publication does not presume that all members have reviewed the content of the document.*

*Consensus NWCC Credit Trading Opportunities and Guidelines is acceptable to the broad stakeholder membership of the NWCC as a Consensus Document. Consensus is defined as “all can live with”. The document was discussed and deliberated by the National Wind Coordinating Committee members at their December 2000 NWCC Meeting. Through subsequent discussions and revisions reflecting input from NWCC members unable to attend the December meeting and other interested parties, the document is acceptable to the entire NWCC.*

### Introduction to Credit Trading and Wind Energy Issues

Trading of emissions credits, allowances and quotas is becoming widely recognized as an effective means of lowering the cost of achieving air pollution control objectives, but the use of credit trading is spreading far beyond emissions trading. Credits are now being developed to convey or represent the environmental and other benefits that flow from the use of renewable energy. The NWCC Credit Trading Project focuses on credits that are derived from wind energy technology, but the same concepts apply to other renewable energy technologies as well. Credit trading can be applied to a wide variety of policies, programs and private market activities and represents a means of tapping into revenue streams that heretofore have largely excluded wind and other renewable energy generation. In addition, credit trading can help to “create” new revenue streams for wind and other renewables by helping to grow new markets.

Depending on how the rules are written, however, credit trading can also create potential liabilities for companies that generate, buy, or sell credits. Wind developers, owners, investors and lenders in the wind sector need to understand both the potential benefits and the pitfalls of credit trading.

## **Project Background and Summary of Credit Trading and Wind Energy: Issues and Opportunities**

The NWCC is a consensus-based collaborative formed in 1994 to encourage the development of a sustainable commercial market for wind power in the United States. The NWCC is comprised of representatives from the utility, wind industry, environmental, consumer, regulatory, power marketer, agricultural and economic development, tribal, state legislator, and local, state and federal government sectors. This analysis of credit trading is intended to educate NWCC members and others, including air quality regulators, the wind industry, utilities and the environmental community, about how credit trading may impact wind development in the U.S.

This study is an assessment and review of credit trading opportunities for wind energy, including a ranking and analysis of those opportunities. As part of this assessment, the report authors have assembled a catalogue of programs and activities in which credit trading is presently being utilized or can be used in the future. This catalogue will serve as a reference for the study and for others interested in examining various forms of credit trading. The study also looks at the major issues affecting credit trading, particularly in terms of their effects on wind energy markets. The complete report will be available from the NWCC as a Resource Document at [www.nationalwind.org](http://www.nationalwind.org) and will be printed.<sup>1</sup>

## **Summary of Consensus NWCC Credit Trading Opportunities and Guidelines**

This addendum aims to summarize the credit trading opportunities for wind energy identified in the full resource document report, as well as to assess the relative effectiveness of activity options in building wind energy markets through various credit trading programs. The addendum also presents a set of guidelines that would be valuable in helping to ensure that credit trading markets develop in a manner that is open and fair to wind energy and to consumers.

Credit trading is a relatively new and rapidly evolving enterprise. The NWCC aims to contribute positively to ongoing discussions about credit trading by providing a snapshot of the current situation and illuminating issues important for wind and other renewable power options. The NWCC intends to maintain active participation in the credit-trading arena as it evolves over the next several years. Toward these aims, the NWCC seeks to engage in dialogue with other organizations and interests on this set of opportunities and guidelines, and on credit trading issues in general. Interested parties should contact the NWCC Senior Outreach Coordinator, Gabe Petlin, at 1-888-764-WIND, or [gpetlin@resolv.org](mailto:gpetlin@resolv.org).

## OPPORTUNITIES

While there is considerable uncertainty about the value and timing of many of the venues in which credit trading could be used, there are some clear steps that could be taken now or in the near future to improve the prospects for wind in these arenas. Several of the following opportunities could involve substantial undertakings on their own, especially when in combination with others. But some of these opportunities could be acted on independently or in concert with others by NWCC members, participants or other interested parties.

1. Help to educate regulatory and other decision makers and market participants to recognize the separation of attributes from energy and the need to allow attributes to be used in compliance of energy and environmental policy requirements and to meet market demand for attributes.

2. Develop credit ownership and transfer contract language linked to wind activity (i.e., within wind PPAs) that reduces risks associated with determining ownership and the transfer of environmental attributes.

- Gather and disseminate the operational language for contracts, agreements, RFPs, and other documents that engage parties in credit trading transactions.
- Develop best practices guide for contracting related to renewables-based credit trading.  
→ *There is burgeoning interest in these transactions, and those who are interested would benefit by having access to various approaches to making these transactions happen.*

3. Facilitate stimulation of private voluntary markets to help jumpstart “new” tradable attributes or products, and to help achieve recognition of these products in the market.

- Purchase “voluntary” renewable energy credits and give them to strategically important stakeholder groups (e.g., air pollution regulators, public utility commissioners, utility or electric supplier organizations).  
➤ *The purpose of the activity would be to encourage such groups to evaluate what the attributes represent in their particular jurisdiction and what issues affect their “use”.*
- Create a mercury trade in the Great Lakes region dispersion area where coal is dominant and acidification of the lakes is a major issue.  
➤ *Seek out an institution buyer (either corporate or environmental), and structure a bilateral trade that establishes a recognition of a mercury avoidance credit. Work with the Emissions Marketing Association, EPA and*

*local air pollution regulators to explore widespread replication of the concept.*

- Develop and execute a “multi-credit” trade that involves pollutants with credit trading history, that is most likely to allow wind participation (i.e., CO<sub>2</sub>, SO<sub>2</sub> and NO<sub>x</sub> together or some combination of two, perhaps including mercury), and that demonstrates the viability of separating and trading attributes locally, regionally, and globally.
- Create a “soup-to-nuts” credit that enumerates and monetizes as many distinct attributes as is feasible.

4. Focus on key policy, legislative and regulatory areas in which activity is expected to be taking place over the near-term, providing opportunities to influence rules and programs. Encourage the inclusion of credit trading to reduce program costs and of wind energy as a technology option to achieve clean air objectives.

- **Multi-Pollutant Bill(s)**
  - *Credit trading provides an opportunity for wind within the context of the multi-pollutant bills that are expected to be under consideration in the new 107th Congress. If this issue is taken up, it would be beneficial for wind if:*
    - *credit trading is included*
    - *wind is included as an eligible technology*
    - *the rules for wind’s participation are fair and non-discriminatory vis-à-vis other emissions avoidance options.*
- **RPS-REC trading**
  - *Wind will be a prime beneficiary where an efficient RPS is in place, and credit trading can help to lower the cost of RPS implementation.*
- **Green Power Markets**
  - *Encourage the use of credit trading as a means to increase choice and reduce the cost of purchasing green power in both regulated and unregulated electric power markets.*
- **SBCs**
  - *Work with System Benefit Charge (SBC) administrators in key states to tune their staff into the credit trading opportunity. The \$2.8 billion that SBCs are expected to spend can be particularly valuable in helping to jumpstart and stabilize credit trading markets. SBC’s public education funds may be especially helpful in creating a comfort level about credit trading among consumers and political or regulatory decision makers.*

5. Creation of a renewable energy credit registry (one national or multiple regional registries), or another comparable mechanism, would allow the recognition of attributes from renewable generation, help to avoid double counting, and help to cope with cross-jurisdictional “seams” issues.<sup>2</sup>

- **Environmental Benefits Inventory (EBI):** Establish a template inventory of environmental benefits enumerating mutually exclusive green attributes for wind-generated electricity (that have measurable environmental benefit) The inventory would include all potential secondary or derived benefits (attributes) such as emissions avoided. The inventory would not in itself quantify any attributes (such as tons of a particular pollutant avoided), or place any monetary value on an attribute. The inventory would simply enumerate all potential attributes associated with wind-generation in the variety of jurisdictions around the US. The inventory could then be used by others to quantify the magnitude of, and assign value to, the environmental attributes depending on the specific context of the jurisdiction in which a particular plant would be located (e.g., using EGRID, other summary emissions data or plant-specific data). The EBI is different from, but complementary to, “certificates” documenting the basic characteristics of energy generation.

6. Develop a coalition of stakeholders and other potential partners to promote priority activities to target audiences.

- Focus on educating key stakeholders on the value of credit trading. Focus on the similarity between credit trading transactions and conventional energy transactions to increase comfort level with the concept.
  - *Partner groups include: renewables advocates, environmental groups, green marketers, NGOs, foundations, business coalitions (BCSE, Sustainable Business Council) and electricity suppliers. Target audiences for education about credit trading include all of the above groups but also include:*
    - *Policy working groups on RPS, Disclosure, especially at the state level*
    - *Inter-state cooperation staff working on harmonization of policies (esp. disclosure, RPS and air pollution regulations)*
    - *ISO staff*
    - *Air pollution regulators at local, state and federal level, especially EPA staff working on encouraging renewables within various programs, STAPCA-LAPCO (local air pollution officials)*
    - *NARUC staff and key commissioners*
    - *PUCs in key states*
    - *Traders (Emission Marketing Association)*

<sup>2</sup> With the creation of a unique certificate representing specific generation attributes, the registry itself would not necessarily need to track sales of attributes, but some mechanism for matching up attributes with claims made would be required.

- *Wind industry trade groups*
- *Renewable industry trade group*
- *NGOs and foundations working in related environmental and energy market areas*
- *FERC or FTC, Attorney's General and NAAG*
- *Consumers and consumer groups*
- Target opportunities to testify at meetings or present written materials to air pollution and energy policymakers and regulators. Look for opportunities to achieve objectives related to credit trading by working within the context of other, related issues and venues. For instance, the definition of jurisdictional boundaries and operational rules as discussed within last year's Regional Transmission Organization (RTO) hearings may have provided a substantial opportunity to raise RTO design issues that affect credit trading.

7. Work with local, state and EPA staff to include wind in all relevant regulatory programs, especially CAA cap and trade programs and including penalties and mitigation.

- **NO<sub>x</sub> SIP Call**
  - *EPA guidance on RE/EE set-aside is being taken seriously in MA, MD NY, NJ, NH, among others. Although many of these SIPs were due at the end of October 2000, there is still an opportunity to work with some of them and this model can be applied elsewhere and with other pollutants.*
- **New NAAQS**
  - *If new, tighter air emissions standards are to go into effect, focus on including a renewables set-aside or other credit program for PM 2.5, SO<sub>2</sub>, NO<sub>x</sub>, etc., especially in existing and expected non-attainment areas.*
- **Clean Air Act Reauthorization**
  - *If broad reauthorization of the Clean Air Act is undertaken, wind can play an important role in a variety of the programs by being included as an eligible technology able to receive set-asides of allowances, "earn" credits or otherwise participate in incentive programs approved under the reauthorization*
- **Penalties and Mitigation**
  - *Penalties and mitigation actions (related to abrogation of pollution rules) can utilize the purchase of credits (or bundled energy) by companies that are the subject of such an action as a mechanism to reduce emissions.*
- **Western Regional Air Partnership (WRAP)**
  - *If emissions ceilings are reached under this haze control program, there are provisions for renewables goals and credit trading. The large regional trading areas under the WRAP include many very good wind sites. The program is still under definition.*

## CREDIT TRADING GUIDELINES

These guidelines are intended to aid in the development of credit trading as a mechanism within a broad array of environmental and energy management venues at the local, state and federal level in the United States. Guidelines are separated into the following two categories:

- a. Defining the Market
- b. Market Operation

### DEFINING THE MARKET

#### ➤ **Clear Definitions**

Attributes, credits and products should be clearly defined and standardized to avoid disputes, double counting and distrust of newly emerging markets, without discouraging necessary market and product innovation.

#### ➤ **Thorough Disclosure**

Full disclosure is important to the development and operation of credit trading markets. Disclosure should be easy to understand, standardized, compatible across jurisdictions and apply across-the-board to all electricity providers. Environmental attributes sold must be disclosed. However, some believe that disclosure may not be sufficient to clarify claims about green power products that do not contain all of their environmental attributes.<sup>3</sup>

#### ➤ **Eligibility**

Wind generators should be included in all relevant programs and regulatory arenas as entities allowed to receive allowances (on an “as-generated” basis) or generate credits.

#### ➤ **Recognition of Attribute Unbundling from Energy**

Laws, regulations and markets should recognize that renewable energy attributes (e.g., those representing emissions) can be unbundled and traded separately from energy.

#### ➤ **Attribute Disaggregation**

Laws, regulations and markets should recognize that environmental attributes can be disaggregated from each other *where appropriate and consistent with consumer protection guidelines<sup>4</sup> and the healthy development of markets*. Disaggregated environmental attributes might best be suited for environmental compliance programs. Aggregated environmental attributes might best be suited for consumer retail markets.

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<sup>3</sup> See for one example of guidelines on disclosure and other consumer protection issues related to green power: *Environmental Marketing Guidelines For Electricity*, National Association Of Attorneys General (NAAG), December 1999.

<sup>4</sup> See note above.

➤ **Substantial Market Size and Local Benefits**

Trading markets should encompass the largest feasible geographic area while remaining consistent with functional characteristics of the attributes being traded. Where appropriate, trading markets and credit products in these markets should take into account local interests so that the environmental, economic, and public health benefits of clean generation can make meaningful contributions to local environmental problems.

➤ **Output-Based Standards<sup>5</sup>**

Output-based standards should be utilized to determine the rates at which credits are earned. Rates should reflect emissions avoidance against system-wide average or marginal emissions unless displacement of specified units can be determined without significant cost or delay.

➤ **Non-Discrimination**

Credit-trading market rules and rates should not discriminate against any resource because of intermittency or non-dispatchability.

➤ **Early Credit**

Early credit (credits allowed for “new” projects installed prior to the start-up of the relevant sponsoring program) should be allowed for non-emitting technologies whenever feasible to maximize near-term environmentally beneficial activity.

➤ **Integrity of Credits**

Credits derived from wind power and traded should be real and verifiable to protect the value of wind development and ensure the long-term viability of the markets served by such credits.

## **OPERATION**

➤ **Liquidity**

Markets should be liquid so that single trades cannot dominate the market.

➤ **Market Certainty**

Market design should provide a time horizon (preferably 8-10 years or more) that is sufficient to allow forward and options contracts to facilitate market activity (i.e., multi-year contracts for credits). Rules and procedures should provide market participants with the confidence that rules will not be changed so as to invalidate prior trades. Markets need to be clearly defined so they can move forward efficiently.

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<sup>5</sup> Defined as emission standards based on units of gross energy output, not on units gross fuel input.

- **Fungibility and Mobility of Credits**

To facilitate creation of larger markets, attributes from renewables should be mobile across jurisdictional borders and, where possible, across policy and program borders as well (this can also be described as merging of markets on a regional, national or multi-pollutant basis). This requires an ability to track cross-border and cross-program trading to avoid double counting.
- **Disconnection of Credit Trading From Time of Delivery Requirements**

Credit trading markets should operate independently of energy markets to maximize efficiency and flexibility. Connecting credit trading to time of delivery or other technical requirements of energy markets may discriminate against intermittent energy resources such as wind.
- **Penalties for Misrepresentation**

Penalties for significant misrepresentations of what is being sold (i.e., knowingly selling attributes twice) should be significant (i.e., loss of license, stiff financial penalties).
- **Administration of Regulatory Non-Compliance Penalties & Mitigation Activities**

Emitters that are in non-compliance should be allowed to buy credits from clean sources in an amount roughly equivalent to appropriate penalties.
- **Annual Market Clearing**

Market clearing of credits or “certificates” should be no more than annual to allow intermittent resources such as wind to “make-up” seasonal periods of low production.
- **Banking/Borrowing Allowed**

True-up mechanisms should allow limited borrowing or banking from adjoining time periods.
- **Trackability**

Attributes and kwhr should be uniquely identified and tracked (or at least subject to audit) so that double-counting does not occur.