



## **STATES' GUIDE FOR SUSTAINABLE BIOFUELS PRODUCTION AND A SUSTAINABLE TRANSPORTATION MODEL**

States should focus on the need for an urgent transition to a sustainable transportation model and act swiftly to decrease fuel consumption, limit the environmental and health impacts of the transport sector and develop a Sustainable Biofuels Standard. Therefore, states should consider the following measures:

### **I: Development and implementation of a Sustainable Biofuel Standard**

States should develop and implement a Sustainable Biofuel Standard that requires sustainable production methods for ethanol produced and sold in the state. States that do not produce feedstocks or ethanol should make sure that ethanol sold in the state complies with these criteria. The Sustainable Biofuel Standard should also be accompanied by a thorough assessment of the state's potential and limitations for the sustainable production of biofuels and the ability of biofuels to displace gasoline consumption. This assessment should be fully integrated with the state's comprehensive transportation plan. The Sustainable Biofuel Standard should cover the production of both ethanol fuel and feedstocks and should be based on criteria regarding the following:

- ➔ **Land Availability and Use:** The Sustainable Biofuel Standard should be based on an overall evaluation of the state's land availability for biofuels feedstock production including impacts on agriculture, food production, and the environment. The assessment of land availability should consider requirements for conservation and idle lands and identify what lands can be converted to biofuel crop production with the least environmental impacts. The Sustainable Biofuel Standard should specifically ban the conversion of protected land for biofuel crops and include minimum requirements for the maintenance and development of land preservation programs.
- ➔ **Water Availability and Use:** The Sustainable Biofuel Standard should be based on an overall evaluation of the state's water availability for both biofuels feedstock crops and ethanol refining. The assessment of water availability should include impacts on agriculture and on the environment, and refinery placement should be subjected to these comprehensive impact assessments.
- ➔ **Agricultural Practices and Biofuel Feedstocks:** The Sustainable Biofuel Standard should require sustainable agricultural practices such as crop rotation, minimal use of inputs (such as fertilizers and pesticides), and reduced tilling and replanting. As corn is one of the least sustainable feedstocks available, states should promote alternative crops for biofuel production, with a focus on cellulosic feedstocks. States should also focus on directing resources for R&D with local academic and research centers aiming at developing the commercial viability of cellulosic feedstocks.
- ➔ **Ethanol Refining:** Besides water availability assessment in determining the location of refineries, the Sustainable Biofuel Standard should also impose requirements on maximum water use and water filtering for ethanol plants. Moreover, refineries' emissions should be strictly limited and the use of coal as a fuel to power ethanol plants should be banned under the Standard.

### ➤ **Protection of Small Farmers and Local Economies:**

The Sustainable Biofuel Standard should also be tied with measures to promote local production of feedstocks and local ownership of refineries, as well as the development of small ethanol cooperatives. Such requirements would secure the distribution of revenues that benefit farmers and rural communities by creating local jobs and keeping profits within the state. Models for locally-controlled ethanol plants have already been tested and lessons have been learned that can inform future initiatives. In Minnesota, for example, legislation helped to establish several ethanol processing cooperatives in the late 1980's. A state program gave the cooperatives incentives to keep ownership in-state, and the cooperatives have helped local economies by buying raw materials from local producers, keeping most of their profits and dividends in the state, and leading to the creation of hundreds of jobs in the community.

### **Next steps for states:**

States should evaluate how the Sustainable Biofuel Standard could be best applied and make use of tax policies to promote sustainable practices for both ethanol fuel and feedstock production. Moreover, the Sustainable Biofuel Standard should be considered in a cross-state framework in order to harmonize criteria without undermining more aggressive sustainability criteria in any given state.

Finally, states should evaluate the costs of developing a biofuels infrastructure (transportation of feedstocks and fuel, refueling stations, development of standards and regulations, etc.) and assess the opportunity costs of such investments in comparison to the cost advantages of fuel demand reduction and conservation strategies.

## **Criteria for sustainable cellulosic feedstock production should include:**

- Establishment of maximum harvesting levels for agriculture residues;
- Promotion of native species planted in diverse composition;
- Promotion of best feedstock production scenarios that would involve mixed perennial grasses and trees which can be harvested on a rotating basis;
- Financial support for farmers growing energy crops in establishment years before crops can be harvested;
- Development of woody crops and grasses in buffer areas between forest remnants and croplands that will enhance biodiversity and habitat protection.



## **II: Create a comprehensive transportation program to drastically reduce fuel demand and limit the environmental impacts of transportation**

A comprehensive plan, adequately funded, should be designed and implemented with the objective of radically reducing the amount of projected fuel demand and limiting the negative impacts of the transport sector on the environment and on human health. Such comprehensive plan should integrate overarching strategies across the energy, environmental and transportation state agencies.

A comprehensive transportation plan should focus on:

- **Assessing projected state transportation fuel demand increase, potential demand reduction, and biofuels' potential and limits to displace gasoline use:** Adequately assessing the state's estimated transportation fuel demand increase and evaluating the potential for consumption reduction is the base for an adequate and effective transportation plan specific to the state's needs and capabilities. Such an assessment should take into consideration a complete set of features characterizing the state's transport model, including pollution levels, status of the public transportation system, average miles traveled, traffic delay costs, urban planning, and consumer attitudes. This assessment should also include the potential and limits of biofuels to displace gasoline consumption.
- **Create emissions standards for new vehicles:** States should limit the level of pollution permissible from new vehicles, as allowed under §177 of the Clean Air Act. These regulations should include the implementation of limits on motor vehicle exhaust and evaporative emissions and improvements in emission systems' durability and performance.
- **Invest in public transportation:** Public transportation should be adequately funded and should be considered as the policy of choice over investments that promote further individual vehicle use. Investment in public transportation should be based on a comprehensive state and inter-state strategy and should be considered a top priority in metropolitan areas where traffic congestion has become endemic as a fundamental measure to reduce travel delays, wasted fuel and overall traffic jam costs.
- **Implement traffic restrictions:** Restrictions in traffic should be imposed in congested urban areas according to vehicle occupancy, size, emissions, and fuel consumption. Establishing these restrictions should be considered as part of an overall policy to reduce transportation pollution.
- **Promote efficient urban planning:** Urban planning and land use regulations should prioritize the need to reduce fuel use and curb transportation-based pollution. Urban sprawl can be limited by implementing land use regulations, tax policies and transportation planning frameworks that instead promote mixed-use urban areas and encourage the revitalization of city centers.
- **Promote the articulation between metropolitan planning organizations and local governments:** Decision making regarding transportation planning and land use changes has often been stalled because of inefficiencies and fragmentation in the decision making process. Transportation and land use planning aimed at reducing fuel demand and air pollution should be a priority for both metropolitan planning organizations and local governments and efficient decision-making bridges should be created between these two sets of entities.
- **Promote consumer demand for more efficient vehicles:** Consumer demand can be affected by fiscal policies, including individual tax credits for buying more fuel efficient vehicles.
- **Plan and implement consumer education campaigns to promote efficient driving:** Driving more efficiently can significantly increase gas mileage, while offering many safety advantages to all drivers and passengers on the road. Aggressive driving (speeding, rapid acceleration and braking) wastes fuel. Maintaining constant speed avoids the huge losses of gas that occur from rapid acceleration and breaking. Moreover, drivers can also be encouraged to use cruise control on the highway, remove excess weight from their vehicles and avoid excessive idling.



## **Food & Water Watch**

Food & Water Watch is a nonprofit consumer organization that works to ensure clean water and safe food in the United States and around the world. We challenge the corporate control and abuse of our food and water resources by empowering people to take action and by transforming the public consciousness about what we eat and drink.

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## **Network for New Energy Choices**

The Network for New Energy Choices (NNEC) promotes safe, clean, and environmentally responsible energy options. We advocate for energy conservation, energy efficiency and renewable energy as the solutions to our energy crisis and we work to educate the public about the way we produce, distribute and consume energy.

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## **Institute for Energy and the Environment at Vermont Law School**

For "Ethanol Business: Dollars and Politics on the Farm" chapter in the full report

The Institute distributes scholarly, technical and practical publications; provides forums and conferences for professional education and issue development; and serves as a center for graduate research on energy issues, with an environmental awareness.

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