



ENVIRONMENTAL LAW & POLICY CENTER
Protecting the Midwest's Environment and Natural Heritage

Comments of the
ENVIRONMENTAL LAW AND POLICY CENTER
on the
Repowering Assistance Program
Proposed Rule

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Introduction

ELPC appreciates the opportunity to comment on the Repowering Assistance proposed rule. Congress' primary reason for enacting Repowering Assistance was to reduce the carbon intensity of biorefineries, especially existing ethanol refineries that typically use fossil fuel for power and heat. The fossil energy inputs to ethanol production increase the carbon intensity of the ethanol production and undermine its attractiveness as a low carbon fuel. If ethanol plants can reduce their carbon pollution by repowering fossil fuel energy systems (boilers, digester and/or gasifiers) with biomass, they and the nation will be better served, and that helps to achieve our national goal of reducing carbon emissions and global warming.

I. USDA Should Support Only Sustainable Biomass Fuels

The Congressional intent for the Repowering Assistance program was to displace fossil fuels in a manner that reduces carbon emissions at biorefineries. The USDA should take steps to ensure that taxpayer funding is not used in ways that could increase carbon pollution, or otherwise harm the environment. This approach is good policy and is also important to maintain public support for this type of program, and biofuels in general. If the public perceives their tax

dollars being used to support projects that harm the environment, a public opinion backlash is likely.

The Repowering Assistance program can and should result in beneficial use of biomass energy crops and residues from farms and forests for fuel. However, USDA should ensure that the development, removal and use of this biomass is done sustainably, by which we mean preserving soil integrity and avoiding erosion, surface water pollution, sedimentation, soil carbon depletion or other negative environmental and natural resource impacts. Some purchasers of crops residues for bioenergy production, like Show Me Energy in Missouri, already require their suppliers to demonstrate removal of residues is done in a sustainable manner. The fact that these purchasers already require a sustainability demonstration indicates both a desire to minimize environmental harm and the ability to do so.

Therefore, to avoid potential harm, ELPC recommends that the Repowering Assistance rule require safeguards be put into place to ensure that fuels and practices are environmentally beneficial. Additionally, on the energy conversion side, a focus on combined heat and power with appropriate fuels has been found to be the best biomass energy pathway toward net reductions in carbon pollution. We address both of these recommendations in more detail below.

II. Issues Raised by USDA in Rulemaking Notice

Following are the issues and questions where the USDA requested feedback in the proposed rule.

A. Eligibility Requirements

The USDA proposes to restrict eligibility beyond the limits set in the authorizing legislation, to only biorefineries in rural areas. ELPC disagrees with this proposal because the Repowering Assistance section in the Farm Bill does not restrict applicants to only those in rural areas – Repowering Assistance, by its terms, applies to any biorefinery, regardless of location. Further, this proposed restriction would narrow the pool of eligible applicants beyond Congressional intent. In so doing, the rural restriction will reduce the overall effectiveness of the program. We elaborate further on this matter in response to the Agency’s question, below under “Rural Restriction.”

The USDA also proposes to limit the number of submissions to one per corporation or entity

(§ 4288.10(c)). While the Department is right to take steps to avoid the program disproportionately benefitting one company, many companies or entities own more than one plant. USDA's proposed "one company, one plant" rule might prevent conversion of more energy systems, thereby limiting program success, if funds would otherwise go unused as a result.

To avoid this potential unintended consequence, we suggest instead that companies with more than one plant should be allowed up to two applications. Once a firm's highest scoring submission wins an award, the lower scoring of the two proposals would be set aside for a second round pool. The second round pool would only be considered if sufficient funds remain available from the first round. If sufficient funding is available, these second round submissions would be ranked according to point scores and selected until available funding is awarded.

This approach will allow the Department to accomplish more in the event a smaller number of firms demonstrate interest in repowering and the program. By limiting the awards to two, USDA will largely preserve its goal of avoiding unfair benefits to one firm, while allowing potentially more use of program funds in some circumstances.

B. Scoring Criteria

The USDA solicits comment on overall scoring criteria. We will address several criteria in turn.

i. Renewable Biomass Factors

The Agency proposes to award extra points according to "renewable biomass factors", which USDA explains as:

If an applicant demonstrates that it has 100 percent control, via on-site or contractual commitments, over its feedstock at the time of application for the repowering project for at least 3 years, 10 points will be awarded.

ELPC has concerns regarding the scoring criteria for "renewable biomass factors." The "renewable biomass factors" as stated here seem to be better described as "biomass supply arrangements." The proposed "factors" do not address whether or not the material is "renewable." We respond to the "biomass supply contract" question later in these comments in direct response to the USDA's question on this subject.

As an alternative scoring approach for "renewable biomass factors," ELPC proposes added

points based on certain factors which reflect the greatest carbon pollution reduction benefits, and best environmental outcomes. For the Repowering Assistance program, the best proposals will maximize the realistic potential for a carbon-neutral, or carbon-negative, project. The goal for these criteria should be to maximize program success by rewarding the submissions with well-grounded and feasible plans for maximum sustainability. Points awarded based on viable practices and plans will allow the USDA to reward submissions that are most likely to accomplish program goals.

We suggest the following:

- 10 points:
 - Project uses crops planted for energy use (such as perennial grasses or fast-growing trees) that are replanted after harvest with procurement plans that demonstrate harvest is accomplished in a sustainable manner.
 - The project uses segregated and uncontaminated residues from the biorefinery process, such as stillage.

ii. Cost-Effectiveness Points

The USDA proposes to award 20 points, or 16% of total points, based upon the project’s return on investment (ROI), with more points awarded for a shorter ROI:

Return on Investment	Proposed Points
Over 2 years and less than or equal to 4 years	Up to 20
Greater than four years but less than or equal to six years	Up to 10 points
Greater than six years	Zero points

USDA proposes this metric to implement the legislative requirement for cost-effectiveness. However, while USDA refers to it as ROI, it actually appears to be a formula commonly understood as “simple payback” to represent the time necessary to pay off the investment through savings or other measurable benefits. As “return on investment” is widely understood to represent a different calculation¹ that measures in terms of percent or rate, not years, we refer to

¹ ROI = $\frac{\text{Gain from investment} - \text{Cost of investment}}{\text{Cost of Investment}}$

USDA's proposed measure as the "payback period" or "simple payback."

Regardless of its name, USDA's proposed approach to implementing this requirement has drawbacks, primarily by boosting the eligibility of projects that need the least funding. If the payback is under three years, we question if the incentive is really necessary, or perhaps if only a smaller incentive is needed to lower the payback to levels warranting investment. Increasing the incentive based on lower payback period may also increase the numbers of "free riders" who do not need an incentive to invest in the plant but can get a grant anyway.

The payback and return on investment performance measures are appropriate for a private investor but can easily lead a public agency astray from implementing the clear goals of the legislation. The measure employed for cost-effectiveness should focus on the effectiveness in accomplishing the legislative intent and goals, rather than short-term profitability. When a public agency cost-shares projects, such as under Repowering Assistance, the decision should be based on measures related to the public policy, not to profit maximization (which is the concern of the private partner).

Payback analysis outcomes will often skew from policy outcomes due to the very factors which make the policy necessary in the first place, such as the failure of energy project evaluation to include the costs of carbon pollution. Payback can also differ between candidate submissions based on factors such as differences in local economics, fuel costs or plant layouts. For example, some facilities may require more costly modifications to adapt to biomass power given their existing plant layout or access to fuel yards. Or, different biomass energy technologies may result in longer payback periods yet higher carbon pollution reductions. A payback focus might diminish the chances at funding for projects that are cost-effective at reaching the public policy goals.

We propose that the criteria for cost-effectiveness be based not on the private sector's measure of payback but, instead, on a measure related to the public policy goals. In this case the primary policy goal is carbon reduction; therefore, the appropriate criterion is the cost per ton of fossil CO₂ emissions displaced. By using this measure the USDA would more effectively address cost-effectiveness as required in the legislation through using the policy goal itself.

iii. Payment Aligned with Fossil Fuel Reduction

The Agency proposes to allocate 35 points, 28% of the total points, as follows:

Whether the payment amount is aligned with the estimated fossil fuel reduction in terms of

incentives and enforcement mechanisms.

This is a very appropriate criterion that the Agency should use with the strong weighting factor proposed, because the goal of reducing carbon pollution is central to the purpose for Section 9004, Repowering Assistance. The legislation states, in Section (b)(2), that the Agency should consider “the percentage reduction in fossil fuel used by the biorefinery that will result from the installation of the renewable biomass system.”

We recommend, for the sake of simplicity and fairness, that the scoring on this point should be calculated as proportional to the percent of fossil fuel displacement. So, for example, displacement of 100% of the fossil fuels results in 35 points. All lower point scores should be proportional to the percentage fossil fuel reduction – for example, 80% of the total 35 points is 28 points. This linear scale rewards more fossil fuel displacement. There should be a minimum floor of at least 50% displacement.

This scoring plan, however, does not account for the most efficient resource use, which will be the most environmentally beneficial utilization strategy. Combined heat and power has approximately twice the efficiency of standalone uses of either heat or power. ELPC proposes that the Agency recognize the value of this approach by awarding under this category 10 points for projects employing combined heat and power technologies, or otherwise demonstrating at least 50% efficiency. The ten points would be in addition to the criteria of “percent displaced fossil fuels,” which maximum can simply be reduced by 10 to 25, maintaining the category’s point totals.

The following table shows how points vary by the percent of fossil fuels displaced for the proposed rule, a proportional level based on a 35 point maximum and a proportional level based on a 25 point maximum.

Proposed Point Scoring Proportionate Points According to Fossil Fuel Displacement

Percent Displaced Fossil Fuels	Points Proposed by USDA	Proportional displacement points with 35 point maximum	Proportional displacement points with 25 point maximum
100%	35	35	25
80%	25	28	20
60%	15	21	15
40%	5	14	10

Further, we recommend there should be bonus points scored for plants that exceed 100% displacement, but only from combined heat and power systems. This can happen if biorefineries become net power, and / or heat, exporters. In most cases they would displace fossil fuels used for other purposes by customers beyond the host plant. This approach would more fully utilize the plant investment, reducing unit costs and potentially increasing project feasibility. For simplicity, we recommend using a single threshold for exported power. We recommend an extra 10 points for power and/or heat exports above 10% of plant demand.

USDA should implement a single methodology to estimate the level of CO2 reductions under the various submissions. Otherwise, a wide range of approaches may be used by applicants, making fair comparison and submission processing very difficult. ELPC recommends that this would be the point to implement the approach using emissions factors for different fossil fuels, as described in the proposed rule number 10 under the “Request for Comments.” By using emission factors established by the Energy Information Administration or the US Environmental Protection Agency for fossil and biomass fuels, the applicants and USDA can use standard and uniform emissions factors and formulae for estimating carbon pollution reductions.

C. Rural Restriction

The agency requests comment on the proposed rural restriction:

As proposed, only biorefineries located in rural areas will be eligible for payments. The Agency is requesting comment on whether biorefineries located in non-rural areas should also be eligible for a payment under this program. Please be sure to provide rationale for your position.

The stated reason for this proposed rural restriction is because “the Agency [i.e., Rural Business-Cooperative Service] is proposing this rural area requirement for consistency with its other programs and its mission to improve the economic conditions of rural America.” However, when Congress authorized the Repowering Assistance program and established the eligibility requirements, it did not limit the Repowering Assistance program to only biorefineries located in rural areas. This rural restriction is not supported in either the Manager’s Report or the legislation. The authorizing legislation very clearly states eligibility includes “*any* biorefinery that meets the requirements of this section.” (Our emphasis.) The statute’s sole discussion of “eligibility” is the following:

Eligibility- To be eligible to receive a payment under this section, a biorefinery shall demonstrate to the Secretary that the renewable biomass system of the biorefinery is feasible based on an independent feasibility study that takes into account the economic, technical and environmental aspects of the system.²

We believe that the Congressional intent is clear in not restricting eligible refineries to only those in rural areas. An example of a similarly clear Congressional rural restriction may be found under Section 9007, the Rural Energy for America Program (REAP). The eligible recipients for REAP are “agricultural producers and rural small businesses.” The second part, “rural small businesses,” clearly limits eligible businesses to only those in rural areas. As REAP shows, Congress knows how to include a rural restriction when it wants to do so.

Notably, the mission for the Rural Business-Cooperative Service of the USDA can be served without a rural restriction, and without conflicting with public policy goals. When facilities in non-rural areas use biomass – whether as a feedstock to produce final products or as fuel – they increase demand for materials produced mostly in rural areas. When public investments build a larger bioeconomy, rural residents benefit from increased rural income from biomass sales and wages. Prohibiting participation by non-rural biorefineries would have the effect of reducing

² 2008 Farm Bill Section 9004(c).

benefits to rural citizens.

By restricting the pool of eligible applicants, the proposal violates the plain language of the statutory authorization, and elevates agency interest over clear federal policy goals. USDA therefore should drop the restriction in the final rule.

D. Requirements on Control of Feedstock

The Agency requests feedback on its proposal to award up to 10 points, 8% of total, based on the level of “control” described in the submission. USDA does not explain the rationale for this proposal:

As proposed, the scoring criterion on renewable biomass requires an applicant to demonstrate control of the feedstock for the repowering project for at least 3 years in order to receive points. The Agency is requesting comment on the appropriate timeframe that the applicant must demonstrate access to the feedstock for the project. Please be sure to provide rationale for your position.

Many firms operate biomass facilities without long-term contracts for their biomass supply. This is a strategic business decision and does not necessarily determine success or failure. Biomass plants often procure materials on a mixed basis, sometimes by long-term contract and other times by simply procuring on the spot market or on short-term contract. For example, a firm may purchase wood from the spot market while also having contracts for biomass from private forests and/or for residues from wood products manufacturers. The term for the contracts can vary and the supply of biomass for a plant will change over time in response to market conditions.

It is possible that USDA included these points as way of assuring a longer-term supply of biomass. Private investors often require a demonstration of the availability of 3-10 times the annual biomass requirement within a reasonable shipping distance as a part of their due diligence.

Therefore, since sufficiency of supply, rather than control of the supply, is the crucial question, ELPC recommends that USDA should require as a threshold criterion that applicants demonstrate an adequate supply of biomass for the plant. Doing so will address the real issue (feedstock supply) without limiting the refinery’s flexibility in managing their fuel supply.

E. Preference for Closed Systems

The Agency requests feedback on its proposal to favor “closed systems”:

The Agency is requesting comment on whether a scoring criterion should be developed to give preference to biorefineries that have closed systems or that can use their own waste streams in the repowering project. Please be sure to provide rationale for your position.

The definition of the term “closed system” here is not clear and, for that reason, should not be part of a rule without a clear definition. We do not address the term for this reason, and suggest that USDA withdraw this unexplained recommendation.

Contact

If you have any questions about these comments, please do not hesitate to contact ELPC Senior Policy Advocate Andy Olsen, at A Olsen@elpc.org, or at 608-442-6998.