

Response to Asian Development Bank Policy Paper of August 2021: “Energy Policy – Supporting Low-Carbon Transition in Asia and the Pacific”

August 31, 2021

We respond specifically on the issue of energy derived from woody biomass.

The policy is somewhat opaque on bioenergy, requiring more specificity on what is envisaged and on the various conditions that may apply. Currently it can be read as open slather with a vague restraint via some sort of unknown “sustainability” criteria. References to the International Energy Association’s recently released roadmap, which includes a 60% increase in bioenergy, as well as references to so-called “sustainably sourced bioenergy” as one of the renewable energy technologies to be accelerated are concerning and imply a reliance on large scale energy generation from woody biomass.

We submit that biomass sourced at volume from natural forests and from plantations is problematic for both climate and biodiversity as well as for local communities, and must not form part of the ADB’s energy policy preferences. Large scale burning of forest biomass for energy is not acceptable as part of a renewable energy portfolio.

Emissive – exacerbates the climate crisis

Burning wood for energy immediately releases at least as much carbon to atmosphere as does burning coal, and is usually more emissive than coal. This makes its use in large centralised energy generation unacceptable as a climate solution. We stress that it remains a priority to end coal fired generation but that to then embark on substitution by woody biomass as a fuel is a false solution¹.

The regrowth of forests is often cited by proponents of bioenergy as rendering this energy source carbon neutral, but in actuality any such regrowth and therefore any removals of carbon from atmosphere to compensate those emissions lags behind by many decades or even hundreds of years (depending on the forest type and its management). Even then the assumption that the forest is actually allowed to recover is unsound. This is unlikely under current forestry regimes which usually are intensified in impact and expanded in area with the additional income stream from this use constituting a driver of such increased pressure on forests. It cannot and will not contribute positively to meeting Paris Agreement targets, rather it exacerbates global climate change at the very time we need to cut emissions.

Note the advice of the European Academy of Sciences Advisory Council (EASAC) in an [open letter](#), *“when a power station switches from coal to wood pellets, a significant amount of extra CO₂ is released, so there follows a period (carbon payback period) during which switching from coal to forest biomass increases atmospheric levels of CO₂. This is often a long period – much beyond the time we have available to meet Paris Agreement targets of limiting warming to 1.5-2°C.”*

¹ For example, recent reporting on an ADB proposal to provide concessional equity for speeding the transition out of coal attracted a great deal of attention and is very welcome. But we urge further a clarification that this proposal does not include the use of biomass as part of, or an eligible technology under, the “green transition” bonds that are contemplated in this accelerated-retirement scheme.

Sustainability criteria do not address this fundamental flaw. Such criteria sometimes claim to adequately address forest management at the production end of the process, but do not contain credible claims or guarantees in relation to the emissiveness of biomass burning and the climate impacts, on the rare occasions they even venture to make such claims.

The claim made in paragraph 30 that bioenergy contributes to a carbon neutral pathway if there is wider use of sustainable fuels and feedstocks is in error. “Nice logging” does nothing to ameliorate emissions of combustion.

Injurious to biodiversity

Large scale use of woody biomass requires large volumes of feedstock. The reference in the policy to an orientation to creating “a resilient energy generation source that uses indigenous resources” should explicitly rule out the use of large volumes of biomass from natural forests.

Although cloaked in argument that such feedstock comprises “residues” it is important to understand that this is not a description of relatively small volumes of wood, nor of minor impacts on the forests. It usually is based upon value per unit of weight or volume of the various products derived from a logging operation – meaning that low volume, high value logs for high value solid wood products such as sawn timber are designated the primary product of the operation, whilst high volume, low value product such as forest biomass is designated a residue even though it can comprise a major component of what comes from the forest. When a market is established for such high volume applications, especially if it is also subsidised, this leads to more intense impacts on forests. The trend to clearcutting accelerates, and the area cut also grows leading to further incursions into natural forests.

The idea that these big impacts over vast areas can be constrained to acceptability via sustainability criteria is also erroneous, even more so when these are characterised as “safeguards”- ie a secondary consideration although large scale bioenergy directly attacks biodiverse and healthy ecosystems. Biodiversity is a core value for ensuring stable long-term biogenic carbon storage and resiliency to climate change. Retaining natural forests and allowing them to grow is their best contribution to addressing climate change and is also fundamental to retaining biodiversity. The policy should also recognise that we are concurrently facing a biodiversity crisis (it does recognise that the region is one of the most affected by biodiversity loss) and should therefore be explicit that actions taken under the policy do not exacerbate that crisis.

Plantation feedstocks - at expense of communities, livelihoods, biodiversity

Establishment of plantations to supply bioenergy also has adverse biodiversity impacts as this usually entails conversion of natural ecosystems to monocultures, completely obliterating biodiversity. They are usually less carbon dense as well, therefore adversely affecting natural carbon storage.

Plantation conversion has a history of dispossession of local peoples. As the IPCC pointed out in its Special Report on Climate Change and Land of August 2019, large scale monoculture plantations for bioenergy would also affect food security and water

availability. It is unacceptable to predicate any energy system on such land uses and on land use changes with such effects.

Demand for biomass can exacerbate conflicts over land and forest resources, including land grabbing. This threatens rights, interests, lives, livelihoods and cultural values of indigenous and tribal peoples and local communities as well as established businesses relying on forest resources. The wide-ranging negative effects can also impact food security for the wider populace and for the long term.

The IEA roadmap makes serious errors on bioenergy as a replacement fuel and should not be used as a guide for bioenergy policy. The roadmap puts natural forests under massively increased threat whilst plantations also expand dramatically, fuelling land grabs and driving people from their homes at the expense of their rights to food and livelihoods.

Air pollution

This is also a major issue with large scale biomass energy generation, and with wood pellet production. The release of fine particulates resulting from combustion, and release of wood dust are injurious to human health. The impacts of biomass burning in relation to domestic heating and cooking appear as a concern, but that these pollutants also impact nearby populations when burnt at scale seems to have escaped the policy.

Transition from coal-fired power

The policy states that the ADB will not participate in investments to modernise, upgrade or renovate coal facilities. This provision should rule out support for co-firing biomass with coal. Given that co-firing is proposed as a climate measure in many places (Indonesia, for example) it would be helpful if the ADB was clear that co-firing biomass with coal will not be supported. Not only is it at least as emissive as burning coal, it has had the effect of extending the life of coal fired power in Europe. This is the antithesis of assisting to achieve a planned phase out.

CCUS

The IPCC Special Report on Climate Change and Land of August 2019 contains a strong warning that large scale bioenergy and BECCS is not a 'get out of jail free' card.

A stark picture is painted of enormously damaging impacts on food security, ecosystem and land degradation and desertification, and adaptation – a tidal wave of impacts on people and nature that effectively rule out the mass tree plantings required by controversial mitigation schemes that could cover huge expanses of current cropland.

The policy as written supports both CCUS and bioenergy, apparently ignoring the IPCC advice. As mentioned the ADB policy is vague on many points around bioenergy and it is difficult to divine whether BECCS is seen as an acceptable recipient of finance as it is not explicitly mentioned, but neither is it rebuffed. It should not be part of this policy.

District Heating

The policy supports district heating via centralised heat production. If this is proposed to be fuelled by woody biomass then it is not acceptable, relying as it does on large scale use with its adverse climate and biodiversity impacts.

Modern bioenergy for households

The policy notes health problems associated with the indoor use of traditional fuels for cooking and heating and canvasses alternatives, including new advanced biomass cookstove models.

According to the IEA the vast majority of modern bioenergy is solid biomass. Rapid replacement of “traditional” biomass with “modern” biomass means a transition to a commodified supply, with big implications for the poorest and most marginalised people in the world. There are also serious doubts that this is feasible. It is certainly true, as stated in the policy that “achieving energy access in an equitable manner will therefore still require mobilizing substantial efforts and resources”, but we add that using solid biomass is not going to be helpful.

There are also the other concerns about impacts of such biomass supply on climate, biodiversity and communities to take into account, given that the volumes involved will add incrementally to large overall volumes. Moving from traditional to modern technologies won't ameliorate those effects if the feedstock is woody biomass.

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