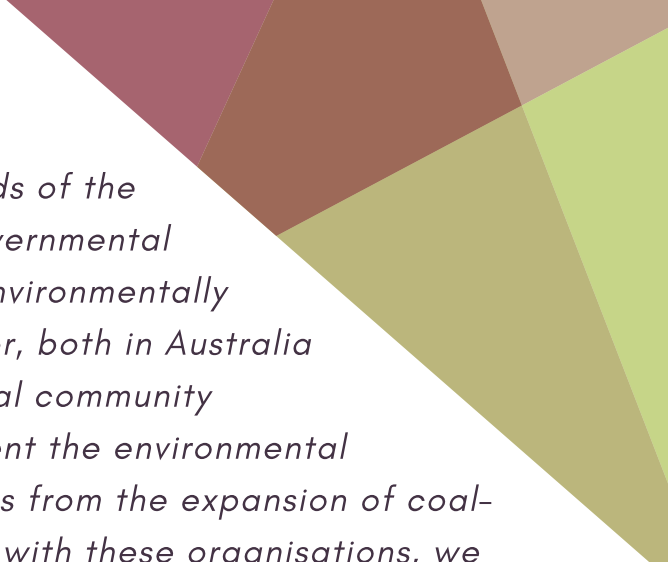


# UNPRINCIPLED:

BANKS VIOLATE EQUATOR  
PRINCIPLES IN FINANCING  
VIETNAMESE COAL-FIRED  
POWER STATIONS



*Market Forces is an affiliate project of Friends of the Earth Australia (FoEA), an Australian non-governmental organisation. Market Forces advocates for environmentally sustainable behaviour from the finance sector, both in Australia and internationally. We are supportive of local community organisations in Vietnam which seek to prevent the environmental degradation and loss of livelihood that results from the expansion of coal-fired power. Through our close collaboration with these organisations, we are able to communicate the information and concerns about the impacts of the coal-fired power projects referred to in this report to the financial institutions around the world that are seeking to or are already financing these projects. We engage with these financial institutions in order to ensure they have a more complete perspective of the environmental and social issues faced by communities impacted by proposed projects.*

## **Summary**

In their involvement in syndicates funding five coal-fired power stations in Vietnam, Equator Principles Financial Institutions (EPFIs) have been violating the Equator Principles (EPs).

Collectively, Hong Kong Shanghai Banking Corporation (HSBC), Mizuho Financial Group (Mizuho), Mitsubishi UFJ Financial Group (MUFG), Sumitomo Mitsui Banking Corporation (SMBC), DZ Bank and Standard Chartered Bank have failed to:

- ensure that the project sponsors disclose information key for communities to evaluate the impacts of proposed power stations, whether through Environmental and Social Impact Assessments (ESIAs) or other means (EP 5),
- require that communities are informed and engaged by ensuring the sponsors hold public consultations and engage stakeholders at the time of the ESIA and on an ongoing basis (EP 5),
- ensure compliance with local law (EP 3),
- demonstrate commissioning independent reviews (EP 7), or
- ensure that the sponsors explore alternatives to the projects or by conducting alternatives analyses themselves (EP 2).

Market Forces and its Japanese and Vietnamese partners have sought information and clarification from the EPFIs involved in the coal-fired power projects listed in this report, with limited response.

## Equator Principles in Vietnamese Coal-fired Power Projects

	Mizuho	MUFG	SMBC	HSBC	Standard Chartered*	DZ Bank
<b>EP 2</b>	Nghi Son 2	Nghi Son 2	Nghi Son 2			
<b>EP 3</b>	Nghi Son 2 Nam Dinh 1	Nghi Son 2 Nam Dinh 1	Nghi Son 2			Nam Dinh 1
<b>EP 5</b>	Vung Ang 2 Nam Dinh 1 Van Phong 1	Vung Ang 2 Nam Dinh 1 Van Phong 1	Vung Ang 2 Van Phong 1	Vinh Tan 3	Vung Ang 2 Vinh Tan 3	Nam Dinh 1
<b>EP 7</b>	Nghi Son 2 Vung Ang 2 Nam Dinh 1 Van Phong 1	Nghi Son 2 Vung Ang 2 Nam Dinh 1 Van Phong 1	Nghi Son 2 Vung Ang 2 Van Phong 1	Vinh Tan 3	Vung Ang 2 Vinh Tan 3	Nam Dinh 1

 indicates where a violation of Equator Principles has occurred

 indicates no involvement

\*Pending review following Standard Chartered's updated power generation position statement excluding new coal.

The EPs as they are written are far from perfect. However, if these principles are to have any meaning, the financial institutions that commit to them must comply with them.

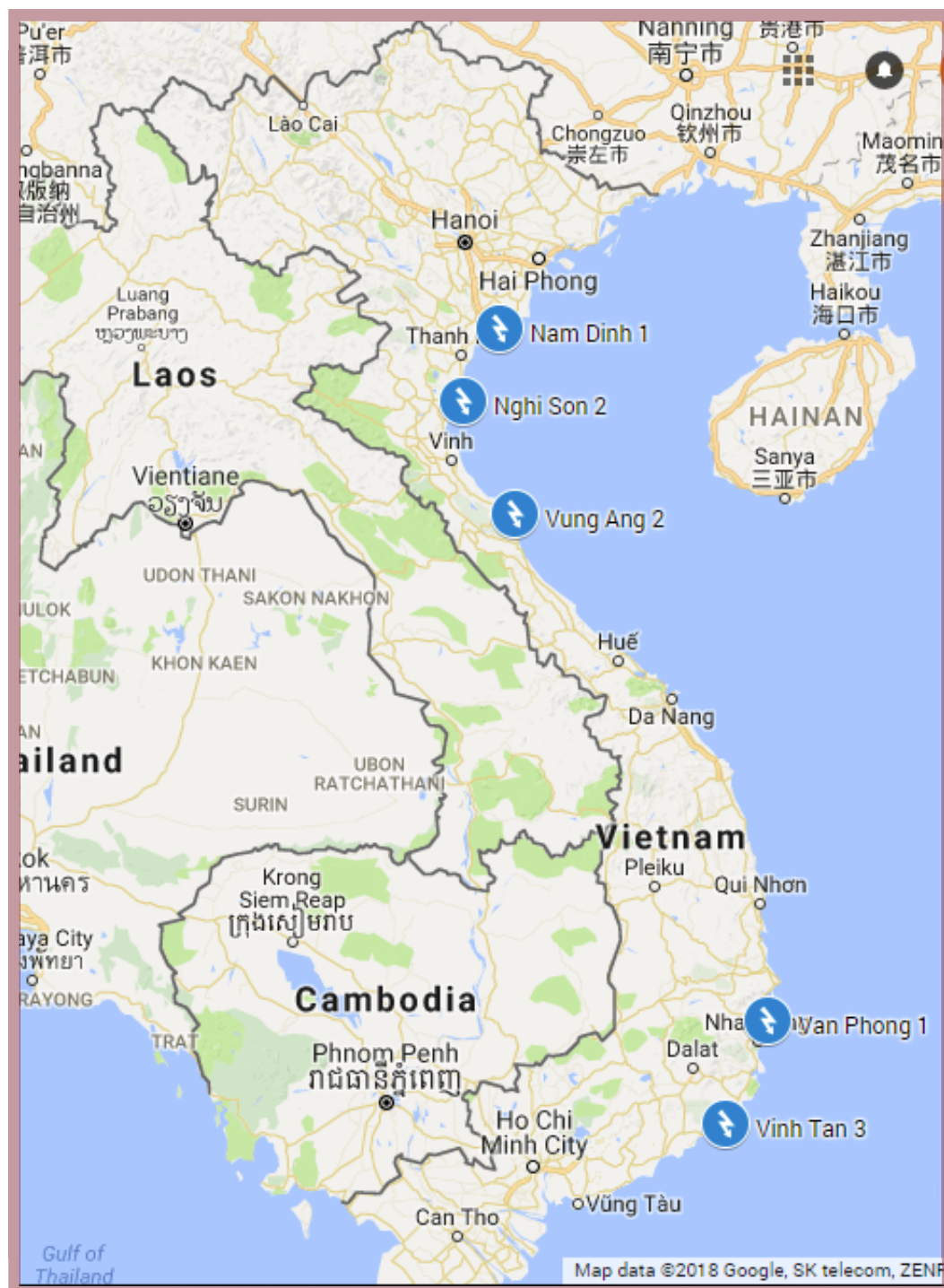
All EPFIs have a responsibility to ensure not only their own compliance with the EPs, but also that of their peers, as the reputation of the EPs is severely threatened by non-compliance. We call on the EPFIs, as well as the EPs Secretariat to ask these banks to answer for their actions.

The EPFIs named in this report should question their commitment to the EPs and consider withdrawing from the Principles in order to maintain their integrity.

## Power projects in Vietnam

In Vietnam, coal-fired power stations that would generate approximately 35,890 MW are in development.<sup>1</sup>

The following five Vietnamese coal-fired power projects are discussed in this report. These are the Vietnamese projects with known EPFI involvement and have raised known concerns. Please see Appendix 1 for a brief description of each project



Location of  
each coal-  
fired power  
project

Source:  
Sourcewatch  
(2018)

**Table 1: List of Vietnamese coal-fired power projects discussed in report**




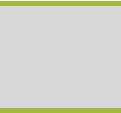
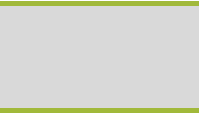
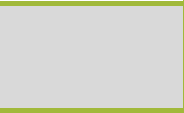
Coal-Fired Power Project	Sponsors	Capacity	Location	EPFIs Involved and role	Stage of Project
Nghi Sơn 2	Korea Electric Power Company (KEPCO) and Marubeni Corporation	1,200MW	Tỉnh Gia district, Thanh Hoa province	<u>Lenders:</u> Mizuho, MUFG, and SMBC <sup>2</sup>	Financial close reached on April 13, 2018 Construction commenced end of July 2 2018 <sup>3</sup>
Vinh Tan 3	One Energy Ventures (a 50:50 joint venture between <ul style="list-style-type: none"> <li>Hong Kong-based CLP Holdings</li> <li>Diamond Generating Asia, a subsidiary of Japan's Mitsubishi Corporation)</li> </ul> and Electricity of Vietnam Group (EVN) and Thai Binh Duong Group	1,980MW	Vĩnh Tân commune, Tuy Phong district, Bình Thuận province	<u>Financial Advisor:</u> HSBC <sup>4</sup> <u>Potential Lender:</u> Standard Chartered* and HSBC <sup>5</sup>	Planning, banks considering providing finance
Vung Ang 2	One Energy Ventures (a 50:50 joint venture between <ul style="list-style-type: none"> <li>Hong Kong-based CLP Holdings</li> <li>Diamond Generating Asia, a subsidiary of Japan's Mitsubishi Corporation)</li> </ul> and Refrigeration Electrical Engineering Corp (REEC)	1,200MW	Kỳ Lợi commune, Kỳ Anh district, Hà Tĩnh province	<u>Financial Advisor:</u> SMBC <sup>6</sup> <u>Potential Lenders:</u> MUFG, Standard Chartered* and SMBC <sup>7</sup>	Planning, banks considering providing finance
Nam Dinh 1	ACWA Power and Taekwang Power	1,200MW	Hải Hậu district, Nam Định province	<u>Lead Arranger:</u> Mizuho <sup>8</sup> <u>Potential Lenders:</u> DZ Bank, Mizuho and MUFG <sup>9</sup>	Planning, banks considering providing finance
Van Phong 1	Sumitomo Corporation	1,320MW	Ninh Phước commune, Ninh Hòa township, Khánh Hòa province	<u>Financial Advisor:</u> SMBC <sup>10</sup> <u>Potential Lenders:</u> Mizuho, MUFG and SMBC <sup>11</sup>	Planning, banks considering providing finance

*\*Pending review following Standard Chartered's updated power generation position statement excluding new coal.*

## Violations of the Equator Principles

**There is no publicly available analysis of potential alternatives to the coal-fired power projects**

### Violations of EP 2

	Mizuho	MUFG	SMBC	HSBC	Standard Chartered	DZ Bank
Nghi Son 2						

 indicates where a violation of Equator Principles has occurred

 indicates no involvement

EP 2: Environmental and Social Assessment states that:

*For all Projects, in all locations, when combined Scope 1 and Scope 2 Emissions are expected to be more than 100,000 tonnes of CO<sub>2</sub> equivalent annually, an alternatives analysis will be conducted to evaluate less Greenhouse Gas (GHG) intensive alternatives.*

1,200MW coal fired power stations clearly fit in this category, requiring alternatives analyses.

Owing to the fact that there are no current, publicly available ESIA's for four out of five of these projects, Van Phong 1, Vung Ang 2,<sup>12</sup> Vinh Tan 3 and Nam Dinh 1, we are unable to ascertain whether an alternatives analysis was completed for these projects.

Nghi Son 2, which was recently financed by Mizuho, SMBC and MUFG, had its ESIA disclosed by JBIC prior to financial close.<sup>13</sup>

Nghi Son 2 has been calculated to have an approximate average CO<sub>2</sub> emissions intensity of between 860 to 880 g CO<sub>2</sub>/kWh.<sup>14</sup> To put this into perspective, Greenpeace's coal and energy analyst estimated that Nghi Son 2 "would generate twice as much CO<sub>2</sub> per every unit of power generated as the average generating plant in Vietnam."<sup>15</sup>

This emissions intensity falls outside internationally accepted benchmarks, even for projects which use outdated supercritical technology, such as the OECD Sector Understanding on Export Credits for Coal-Fired Electricity Generation.<sup>16</sup>




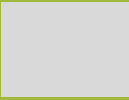
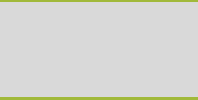
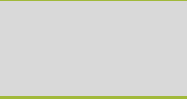


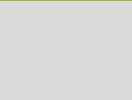
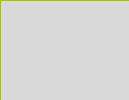
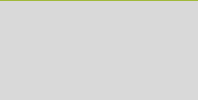









Despite these very high emissions, the ESIA of Nghi Son 2 failed to discuss alternatives to supercritical technology, and coal-fired power more generally, including whether the alternatives considered included renewable energy projects. If such an analysis was conducted by the EPFIs themselves, it was not made publicly available.

Not ensuring that an alternatives analysis was conducted, or by not conducting the analysis themselves, constitutes a breach of EP2 by SMBC, Mizuho and MUFG.

## ESIAs appear non-compliant with Vietnamese law

### Violations of EP 3

	Mizuho	MUFG	SMBC	HSBC	Standard Chartered*	DZ Bank
Nghi Son 2						
Nam Dinh 1						
Vung Ang 2						

 indicates where a violation of Equator Principles has occurred

 indicates no involvement

\*Pending review following Standard Chartered's updated power generation position statement excluding new coal.

EP 3: Applicable Environmental and Social Standards states:

*The Assessment process should, in the first instance, address compliance with relevant host country laws, regulations and permits that pertain to environmental and social issues.*

Article 21 of the Vietnamese Law on Environmental Protection 2014 states project owners are obliged to consult communities that are directly affected by the project.<sup>17</sup>

The disclosed Nghi Son 2 ESIA does not make clear whether and how public consultation with communities affected by the project took place.<sup>18</sup> The project sponsor of Nghi Son 2 has not demonstrated that they have conducted public consultations of the project in accordance with this law.

Article 20 of the Vietnamese Law on Environmental Protection 2014 states that project owners must repeat the ESIA where the project is not executed within 24 months of the date of the approval of the ESIA.<sup>19</sup>

The disclosed Nghi Son 2 ESIA is dated February 2015, more than three years prior to financial close and the commencement of construction. Nevertheless, to our knowledge and to the knowledge of the Vietnamese community groups on the ground, the ESIA was not repeated prior to financial close.

Vietnamese community groups have reported that Nam Dinh 1, one of the planned coal-fired power projects listed in Table 1, had its ESIA approved in 2012.<sup>20</sup> It has been over six years since the ESIA was approved, and the plant remains in the planning phase. This ESIA is therefore invalid and the project sponsor should be required to repeat it.

This issue was recently recognised by the Ministry of Planning and Investment (MPI) regarding the planned Vung Ang 2 coal-fired power project (also listed in Table 1), also anticipated to be financed in 2018. MPI stated:

- (1) there is a disconnect between the land area stipulated by the government for use in the project and the land area referred to in the project proposal; and
- (2) The ESIA was approved in 2015, but contrary to section 20 of the Vietnamese Law on Environmental Protection 2014 a new ESIA has not been conducted.<sup>21</sup>

To our knowledge, a new ESIA has not been conducted.

In failing to ensure the projects comply with Vietnamese law, the EPFIs involved in these projects have failed to comply with EP 3.



## Project-affected communities and other stakeholders have not been effectively engaged on the coal-fired power stations

### Violations of EP 5

	Mizuho	MUFG	SMBC	HSBC	Standard Chartered	DZ Bank
Nghi Son 2	✗	✗	✗			
Nam Dinh 1	✗	✗				✗

✗ indicates where a violation of Equator Principles has occurred

■ indicates no involvement

In addition to public consultation as required under Vietnamese law, EP 5: Stakeholder Engagement requires engagement of stakeholders in the project. This principle states:

*For all Category A and Category B Projects, the EPFI will require the client to demonstrate effective Stakeholder Engagement as an ongoing process in a structured and culturally appropriate manner with Affected Communities and, where relevant, Other Stakeholders.*

*For Projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation process. The client will tailor its consultation process to: the risks and impacts of the Project; the Project's phase of development; the language preferences of the Affected Communities; their decision-making processes; and the needs of disadvantaged and vulnerable groups. This process should be free from external manipulation, interference, coercion and intimidation.*

As noted above, the disclosed Nghi Son 2 ESIA does not include evidence of public consultation or participation. There are no reports that communities affected by Nghi Son 2 are being consulted on an ongoing basis regarding the terms of the project.

There is also particular concern regarding fishing communities in close proximity to Nghi Son 2 that would be displaced by the construction of the coal-fired power project. These communities would be impacted by a lack of access to the port area to fish but also because of potential discharge from the coal plant affecting fisheries. Had there been adequate consultation about Nghi Son 2, local authorities and any participating financial institutions would have been advised about the importance of this area to fishing communities for their livelihoods.<sup>22</sup>

In the case of Nghi Son 2, Mizuho, MUFG and SMBC have failed to require that their client, the project sponsor, demonstrate effective community consultation and stakeholder engagement at the time of the ESIA and on an ongoing basis. This demonstrates a failure to comply with EP 5.

In the case of Nam Dinh 1, community interviews conducted by Vietnamese community organisations indicate that only the local authority and headpersons of 19 villages in the community were consulted, rather than households within those communities. This can hardly be considered sufficient for a community which in 2016 had a population of 294,219.<sup>23</sup> Further, there are no details provided regarding the information given to these headpersons about the benefits of the project and the potential risks that must be mitigated and whether other opportunities were given for others to become informed and provide input into the project. Mizuho, MUFG and DZ Bank in failing to require that the sponsor demonstrate adequate community engagement and consultation, have failed to comply with EP 5.

**There remains an inherent lack of transparency and information regarding the coal-fired power stations**

## Violations of EP 5

	Mizuho	MUFG	SMBC	HSBC	Standard Chartered*	DZ Bank
Vung Ang 2	X	X	X		X	
Nam Dinh 1	X	X				X
Van Phong 1	X	X	X			
Vinh Tan 3				X	X	

 indicates where a violation of Equator Principles has occurred

 indicates no involvement

\*Pending review following Standard Chartered's updated power generation position statement excluding new coal.

EP 5: Stakeholder Engagement requires that assessment documentation be readily available to project-affected communities. This principle states:

To facilitate Stakeholder Engagement, the client will, commensurate to the Project's risks and impacts, make the appropriate Assessment Documentation readily available to the Affected Communities, and where relevant Other Stakeholders, in the local language and in a culturally appropriate manner.

The client will take account of, and document, the results of the Stakeholder Engagement process, including any actions agreed resulting from such process.

For Projects with environmental or social risks and adverse impacts, disclosure should occur early in the Assessment process, in any event before the Project construction commences, and on an ongoing basis.

Van Phong 1, Vung Ang 2,<sup>24</sup> Vinh Tan 3, and Nam Dinh 1 do not have current, publicly available ESIA's. As noted above, the Nghi Son 2 ESIA was disclosed by JBIC prior to financial close.

Without the ESIAs, it is impossible for communities to make informed decisions about the projects. For example, Vinh Tan 3, a planned 1,980 MW power station (see Table 1), is situated in a complex with three other coal-fired power stations with an anticipated total capacity of 6,225 MW. The public has raised significant concerns with the other coal-fired power projects in the complex.<sup>25</sup>

Since coming online in 2014, owing to the arid climate and high winds in the area, coal ash from an adjacent plant, Vinh Tan 2, has affected air quality. Many villagers, especially children, have reported respiratory illnesses<sup>26</sup> and leaks from the power plant have caused damage to farms.<sup>27</sup> Coolant water from the plant discharged into the sea at high temperature has caused fish populations to decline, affecting the incomes of families dependent on fishing.<sup>28</sup> Vinh Tan 1, another project in the Vinh Tan complex, that has recently become operational, has faced strong opposition from scientists, as the dredging and dumping necessary to prepare waterways for the plant to import coal would harm the Hòn Cau Marine Protected Area (MPA) and affect marine resources.<sup>29</sup>

The cumulative impacts that would result from the construction and operation of Vinh Tan 3 are clearly of great significance to communities already facing impacts from other projects in the Vinh Tan complex.<sup>30</sup> Without the Vinh Tan 3 ESIA, which would disclose where coolant water may be discharged or how coal ash may be mitigated, for example, communities cannot make their own informed assessment about the impact that this project may have on their lives.

Vietnam's laws do not require environmental impact assessments to be made publicly available, further underscoring the importance of EPFIs to ensure this material reaches the public domain and is accessible by stakeholders.

Not allowing the project-affected communities access to information about potential impacts and alternatives to the project is also contrary to EP 3, which clearly indicates that financial institutions cannot hide behind poor regulatory frameworks in the countries in which they operate. While Vietnam does not require disclosure of environmental impact assessments, in "non-designated" countries (as defined in the EPs) such as Vietnam, the assessment process for project finance must comply with the International Finance Corporation's Performance Standard 1, which requires the project sponsor provide affected communities with access to relevant information on:

- (iii) any risks to and potential impacts on such communities and relevant mitigation measures; (iv) the envisaged stakeholder engagement process....

None of this information has been evidently provided to the communities that would be affected by Vung Ang 2, Van Phong 1, Vinh Tan 3 or Nam Dinh 1. Vietnamese community organisations have sought current ESIs from the project sponsors and EPFIs, to no avail.

Failure to provide these ESIs violates EP 5. The EPFIs must require the sponsors to share this information with project-affected communities and other stakeholders.

## Whether or not Independent Reviews have not been conducted and disclosed

### Violations of EP 7

	Mizuho	MUFG	SMBC	HSBC	Standard Chartered*	DZ Bank
Nghi Son 2	X	X	X			
Vung Ang 2	X	X	X		X	
Nam Dinh 1	X	X				X
Van Phong 1	X	X	X			
Vinh Tan 3				X	X	

X indicates where a violation of Equator Principles has occurred

indicates no involvement

\*Pending review following Standard Chartered's updated power generation position statement excluding new coal.

EP 7: Independent Review states as follows:

For all Category A and, as appropriate, Category B Projects, an Independent Environmental and Social Consultant, not directly associated with the client, will carry out an Independent Review of the Assessment Documentation including the ESMPs, the ESMS, and the Stakeholder Engagement process documentation in order to assist the EPFI's due diligence, and assess Equator Principles compliance.

There is no evidence of independent reviews being conducted by any of the EPFIs involved in the above projects, both in respect of Nghi Son 2, which has reached financial close, and the yet-to-be financed projects, Vinh Tan 3, Van Phong 1, Vung Ang 2, and Nam Dinh 1. EPFIs have not confirmed, despite requests from NGOs as to whether these projects have been independently reviewed. The onus is on the EPFIs to demonstrate compliance with EP 7, and they have failed to do so.

## **Overarching concerns about coal projects in Vietnam**

In addition to violating the EPs, the pollution resulting from these projects represent significant environmental and health concerns.

Published peer-reviewed academic research from Oxford University has shown “...even under the very optimistic assumption that other sectors reduce emissions in line with a 2°C target, no new emitting electricity infrastructure can be built after 2017 for this target to be met, unless other electricity infrastructure is retired early or retrofitted with carbon capture technologies.”<sup>31</sup> As a recent study states, Vietnam could experience 948 percent growth in CO<sub>2</sub> emissions by 2030 if current plans to expand coal power are carried forward.<sup>32</sup> As Jim Yong Kim, President of the World Bank, stated in 2016, “If Vietnam goes forward with 40GW of coal, if the entire region implements the coal-based plans right now, I think we are finished.”<sup>33</sup>

Already, Vietnam has experienced a significant rise in air pollution due to coal, responsible for 4,300 premature deaths in 2011.<sup>34</sup> That number is estimated by researchers at Harvard University to rise almost five-fold to 19,220 excess deaths in 2030.<sup>35</sup> In the case of the Vinh Tan complex, as noted above, respiratory illnesses and livelihood impacts have been reported as resulting from coal-fired power stations.<sup>36</sup>

Alternatives do exist to this coal-fired power technology – prospects for solar and wind are improving significantly in Vietnam.<sup>37</sup> EPFIs should direct their efforts towards supporting this technology, rather than financing polluting coal power.



## Recommendations

The other EPFIs and the Secretariat must hold the relevant EPFIs to account by:

- engaging the institutions named in this report with the intention of bringing practices into line with the EPs, and
- where this engagement does not yield results, publicly censuring the named EPFIs for failure to comply with the EPs.
- The ongoing membership of these institutions to the EPs should also be reviewed, in respect of whether the EPs being brought into disrepute is an outcome that other EPFIs and the Secretariat can tolerate.

The offending EPFIs named in this briefing should:

- consider their position as signatories to the EPs, and
- if sincere in their status as an EFPI, publicly address the concerns raised in this report, stating any remedies they intend to adopt.

The EPs are expected to ensure that financial institutions only finance projects which protect the environment and safeguard the rights of project-affected communities. The principles are rendered meaningless if financial institutions participating in the principles continue to flout them.

## Appendix 1: Description of each project

**Nghi Son 2** is a 2 x 600 MW coal-fired power station located in Tĩnh Gia district, Thanh Hoa province in Vietnam, sponsored by Korea Electric Power Company and Marubeni Corporation. This project uses supercritical technology and has an anticipated average emissions intensity of 860–880g CO<sub>2</sub>/kWh.

This project reached financial close on 13 April 2018. Construction commenced end of July 2018.<sup>38</sup> Nghi Son 2 is scheduled to be completed in July 2022.<sup>39</sup>

Mizuho provided project finance to Nghi Son 2. The total debt was USD \$1,869 million. The contribution of Mizuho, MUFG and SMBC was as follows:

Mizuho – US\$ 99.3 million

MUFG – US\$132.4 million

SMBC – US\$132.4 million<sup>40</sup>

Standard Chartered Bank, previously linked to financing this plant, stated that they were reviewing their involvement in this project after being alerted to the project's high greenhouse gas intensity. At the time of financial close Standard Chartered was no longer part of the syndicate.

**Vinh Tan 3** is a planned coal-fired power station sponsored by the Vinh Tan 3 Joint Stock Energy Company. The SPV is composed of OneEnergy Ventures Limited [a 50:50 JV between Hong Kong-based CLP Holdings and Diamond Generating Asia, a subsidiary of Japan's Mitsubishi Corp] 49%, Electricity of Vietnam Group 29% and Thai Binh Duong Group 22%.<sup>41</sup> It is expected to have a capacity of 3 x 660 MW and be situated in a complex in Vĩnh Tân commune, Tuy Phong district, Bình Thuận province including four other coal-fired power stations with an anticipated total capacity of 6,224 MW. The ESIA for this project has not been made publicly available. Based on public information, we understand that the sponsors of the project will be using supercritical technology.<sup>42</sup>

HSBC is the financial advisor. HSBC and Standard Chartered are among the syndicate of banks discussing potential finance.<sup>43</sup> However, Standard Chartered's power generation position statement of September 2018<sup>44</sup> is yet to be applied to this project. We expect Standard Chartered to exit the syndicate as a result of its new position statement.

**Vung Ang 2** is a planned 2 x 600MW coal-fired power station in Kỳ Lợi commune, Kỳ Anh district, Hà Tĩnh province in Vietnam. The technology type of this project is unknown, as the current ESIA for this project has not been made publicly available. The project sponsors are One Energy Ventures (a 50:50 joint venture between Hong Kong-based CLP Holdings and Diamond Generating Asia, a subsidiary of Japan's Mitsubishi Corporation) and Refrigeration Electrical Engineering Corp (REEC).<sup>45</sup>

The investment agreement for this power station was signed in January 2017.<sup>46</sup> This project has yet to be financed, but the syndicate of banks discussing potential finance currently involves Standard Chartered, MUFG, Mizuho and SMBC.<sup>47</sup> We understand these banks have not signed loan agreements but are considering financing these projects. However, Standard Chartered's power generation position statement of September 2018 is yet to be applied to this project. We expect Standard Chartered to exit the syndicate as a result of its new position statement.

**Nam Dinh 1** is a planned 2 x 600MW coal-fired power project in Hải Hậu district, Nam Định province in Vietnam. The sponsors are ACWA Power from Saudi Arabia and Taekwang Power from South Korea.<sup>48</sup>

The investment agreement for this power station was signed in January 2017.<sup>49</sup> The syndicate of banks is expected to include DZ Bank, Mizuho and MUFG.<sup>50</sup> We understand that these banks have not signed loan agreements but are considering financing these projects.

**Van Phong 1** is a planned 2 x 660MW coal-fired power project in Ninh Phước commune, Ninh Hòa township, Khánh Hòa province in Vietnam. The project sponsor is Sumitomo Corporation.<sup>51</sup> The funding is anticipated to involve SMBC, MUFG and Mizuho and SMBC is providing financial advisory services.<sup>52</sup> We understand that these banks have not signed loan agreements but are considering financing these projects.

The ESIA for this project is has not been made publicly available contrary to international best practice, although we understand the ESIA was completed in March 2018.<sup>53</sup> The project is expected to use supercritical technology.<sup>54</sup>

# References

1. Coal Plants by Country (MW), *Global Coal Plant Tracker* (July 2018), online: <https://endcoal.org/global-coal-plant-tracker/>. These consist of projects that are announced, pre-permitted and permitted. This does not include the 9,435 MW of coal power capacity that is under construction.
2. Minerva Lau, Project Finance International, 'Nghị Sơn 2 IPP Loan signs, finally' (18 April 2018).
3. Pulse News, 'Doosan Heavy Industries begins construction of thermal power plant in Vietnam' (26 July 2018), online: <https://pulsenews.co.kr/view.php?year=2018&no=469625>
4. Mia Tahara-Stubbs, IJGlobal, 'Vinh Tan 3 coal-fired sets sights on term sheet form agreement' (2 June 2017).
5. Ibid.
6. Minerva Lau, Project Finance International, 'OneEnergy appoints Vapco adviser' (15 August 2018).
7. Mia Tahara-Stubbs, IJGlobal, 'Banks mandated on Vietnam Vung Ang 2 coal-fired' (23 January 2017).
8. Mia Tahara-Stubbs, IJGlobal, 'Vietnam issues investment registration certificate for Nam Dinh 1 coal-fired' (4 July 2017).
9. Ibid.
10. Minerva Lau, Project Finance International, 'Van Phong IPP into due diligence' (22 June 2018), reported as seeking Japanese bank finance.
11. Ibid.
12. Please note that we have obtained a 2011 ESIA for Vung Ang 2. It does not contain an analysis of alternatives to the project. However, because there is conflicting information about whether this is the most current ESIA (or whether one was conducted in 2015), we have excluded it from this analysis.
13. Japan Bank of International Cooperation, (6 February 2018) online: [https://www.jbic.go.jp/ja/business-areas/environment/projects/pdf/60385\\_2.pdf](https://www.jbic.go.jp/ja/business-areas/environment/projects/pdf/60385_2.pdf)
14. Lauri Myllyvirta, Greenpeace's coal and energy analyst, used engineering calculations based on technical data in the ESIA dated 5 February 2015 to make his estimates, revised down from an initial assessment of 890 since March 2018. Please contact us if you would like further detail on the calculations. See Nghi Son 2, Market Forces, online: <https://www.marketforces.org.au/research/vietnam/nghi-son-2/>
15. Ibid.
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