

# Environmental Justice and the Energy Transition: How the Energy Industry Can Do Better

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**E**nvironmental justice (EJ) communities are defined as “a community with significant representation of communities of color, low-income communities, or tribal and indigenous communities, that experiences, or is at risk of experiencing higher or more adverse human health or environmental effects.”<sup>1</sup> As the energy transition to cleaner and greener forms of energy is accelerating, it does not necessarily mean the development of renewable energy projects will happen with little or no EJ conflicts. Just the opposite may occur, but in the name of fighting climate change.

Despite US national policies that promote oil, natural gas, and coal, the growth of renewable energy, transmission lines to move clean power to market, and electric storage projects continues. That growth may accelerate depending on the

outcome of the 2020 presidential election. For example, the Biden-Sanders climate change panel published a report recommending eliminating carbon pollution from power plants by 2035. This would be accomplished through the installation of 500 million solar panels and 60,000 wind turbines both on- and offshore.<sup>2</sup> The plan would also create a battery storage and clean energy transmission line moonshot program. As a result, EJ communities might be especially affected by attempts to convert large tracts of land into energy industrial production and transmission corridors. Likewise, EJ communities in urban areas will likely have to deal with the expansion of utility-scale electric battery storage projects.<sup>3</sup>

Unless regulators, agencies, and developers take the necessary steps to engage with EJ communities, increased conflicts, costs, delays, and litigation could thwart a successful clean energy transition. Existing EJ guidance is based on Executive Order (EO) 12898 from President Clinton in 1994, along with further guidance from the Council on Environmental Quality (CEQ) and Environmental Protection Agency (EPA) and generally focuses on procedural and distributive concerns. Aside from implementing this, federal agencies and developers should practice “recognition justice”

<sup>1</sup> House Select Committee on the Climate Crisis. (2020, June). *Solving the climate crisis*. Prepared by Majority Committee Staff pursuant to H.Res.6; p. 301. Retrieved from <https://climatecrisis.house.gov/report>.

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<sup>2</sup> Whieldon, E. (2020, July 9). Biden-Sanders task force's climate plan excludes fracking ban, sees FERC role. *S&P Global*. Retrieved from <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/biden-sanders-task-force-s-climate-plan-excludes-fracking-ban-sees-ferc-role-59376934>.

<sup>3</sup> Russo, T., & Kim, K. (2019). Is electric battery storage overrated as a clean technology? *Natural Gas & Electricity*, 36(4), 21–27. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1002/gas.22145>.

by adequately acknowledging an individual or a group in an EJ community.<sup>4</sup> The rising EJ conflicts over the siting of oil and natural gas pipelines that has followed the transition from coal to gas-fired power plants provides a window into future EJ conflicts when such conflicts are not acknowledged and addressed.

## ENVIRONMENTAL JUSTICE

In the 1980s, two landmark events marked the beginning of the EJ movement.<sup>5</sup> The first event included sit-in protests over the construction of a toxic PCB landfill in Warren County, North Carolina, a county with predominantly black residents.<sup>6</sup> Similarly, in 1987 the United Church of Christ's (UCC's) Commission for Racial Justice published its landmark report on environmental racism with respect to toxic waste in the United States.<sup>7</sup> Accordingly, the UCC report became "a cornerstone of the EJ movement."<sup>8</sup>

<sup>4</sup> Preston, C., & Carr, W. (2018). Recognition justice, climate engineering, and the care approach. *Ethics, Policy & Environment*, 21, 308–323. doi: 10.1080/21550085.2018.1562527.

<sup>5</sup> Environmental Protection Agency. (n.d.). *Environmental justice*. Retrieved from <https://www.epa.gov/environmentaljustice>.

<sup>6</sup> Ibid.

<sup>7</sup> United Church of Christ Commission for Racial Justice. (1987). *Toxic wastes and race in the United States: A national report on the racial and socio-economic characteristics of communities with hazardous waste sites*. Retrieved from <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>.

<sup>8</sup> McGurty, E. (1997). From NIMBY to civil rights: The origins of the environmental justice movement, *Environmental History*, 2, 301–323. Retrieved from [https://www.jstor.org/stable/3985352?seq=2#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/3985352?seq=2#metadata_info_tab_contents).

In the three decades since, there have been some regulatory successes for EJ in the form of EO 12898, the CEQ EJ guidance under the National Environmental Policy Act (NEPA), and work at the EPA. In spite of these actions, few EJ proponents and energy developers are satisfied with the procedures, and federal agencies and developers face litigation and delays as a result.

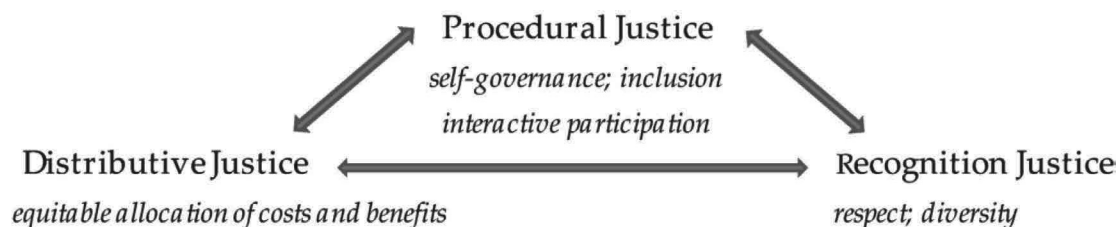
There are three types of EJ—distributional, procedural, and recognition—the authors will discuss in this article (**Figure 1**).<sup>9</sup> Distributional justice concerns the geographic location of environmental benefits and hazards, often arising when a disproportionate number of polluting facilities or harmful infrastructure are sited near or in EJ communities. Procedural justice concerns public participation and the idea that EJ communities must have a voice and meaningful input in planning processes and siting decisions.

Most agencies and energy developers focus on procedural and distributive justice. However, recent studies show that recognition is almost a precursor to achieving procedural and distributive justice. Adequate acknowledgment means noticing past wrongs and burdens placed on the EJ community and the lack of benefits from former energy development. Recognition justice also involves respecting people for who they are and where they live.<sup>10</sup> Kyle Powys Whyte says recognition means "fairly representing and

<sup>9</sup> Finley-Brook, M., & Holloman, E. L. (2016). Empowering energy justice. *International Journal of Environmental Research and Public Health*, 13, 926.

<sup>10</sup> See Note 4.

**Figure 1.** Types of Environmental Justice



Source: Finley-Brook, M., & Holloman, E. L. (2016). Empowering energy justice. *International Journal of Environmental Research and Public Health*, 13, 926.

considering the cultures, values, and situations of all affected parties.”<sup>11</sup>

## CURRENT EJ PRACTICES

In response to the demands of EJ activists, President Clinton signed EO 12898 in 1994.<sup>12</sup> This EO requires that federal agencies “make achieving EJ part of [their] mission by identifying and addressing” environmental hazards on “minority populations and low-income populations.”<sup>13</sup> This was the first federal action on EJ, and it had some success in addressing distributional justice. For example, the siting of toxic waste disposal sites and polluting facilities improved as a result of the EO.<sup>14</sup> Other regulatory actions addressing EJ include the CEQ’s EJ guidance on incorporating and considering EJ and establishing EJ under the NEPA umbrella.<sup>15</sup>

Tools such as EJSCREEN are being published and developed by the EPA and Inter-agency Working Group for EJ. EJSCREEN is “an EJ mapping and screening tool” that is used to combine environmental and demographic factors for assessing EJ.<sup>16</sup> It is useful not only as a government asset, but also as a tool energy developers and decision-making agencies can access on the EPA’s website.

## PUTTING ENVIRONMENTAL IMPACTS AHEAD OF COMMUNITY

Despite the steps taken by EO 12898, the CEQ, and the EPA, energy projects continue

to disproportionately harm EJ communities. The EPA states that EJ would be achieved when all people have the same protection from environmental hazards and equal ability to participate in decision-making processes.<sup>17</sup> However, despite the considerable expansion of EJ regulation, identification, and oversight, “poor communities and communities of color are still overexposed to environmental harms.”<sup>18</sup>

From a basic regulatory sense, it could be argued that EO 12898 struggles because it lacks the full “power of the law.”<sup>19</sup> However, this explanation lets the failure of EJ regulation off the hook while neglecting the true causes of continued environmental injustice. Federal agencies and regulators implementing NEPA and dealing with EJ communities have routinely put traditional environmental impacts and project benefits ahead of EJ communities. This is a systemic problem that is seen in a variety of cases involving energy infrastructure and will continue to occur with the clean energy transition and associated renewable infrastructure. For example, an overemphasis on environmental protection of fish and wildlife was problematic during the relicensing of California’s Oroville Dam’s Environmental Impact Statement (EIS). The project, which catastrophically lost its spillway, has more discussion in its FERC license devoted to the maintenance of waterfowl brood ponds than for the early-warning system to alert nearby communities of impending dam failures.<sup>20</sup> With an urgent focus on decarbonization and fighting climate change, the outlook for EJ communities facing a tsunami of solar, wind, transmission line, and electric storage projects is bleak given the current regulatory landscape.

## COMPARING EJ AND TRADITIONAL ENVIRONMENTAL CONSULTATION

Many energy developers and regulatory agencies<sup>21</sup> are overwhelmed by the priority given to traditional environmental reviews—endangered species, water quality, fish and wildlife, wetlands,

<sup>11</sup> Whyte, K. P. (2011). The recognition dimensions of environmental justice in Indian country. *Environmental Justice*, 4, 199–205.

<sup>12</sup> Pullido, L., Kohl, E., & Cotton, N.-M. (2017). State regulation and environmental justice: The need for strategy reassessment. *Capitalism Nature Socialism*, 27(2), 12–31. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/10455752.2016.1146782>.

<sup>13</sup> Executive Order 12898 of February 11, 1994, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, *Federal Register*, 59, no. 32 (1994), <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

<sup>14</sup> Gerber, B. J. (2002). Administering environmental justice: Examining the impact of executive order 12898. *Policy and Management Review*, 2(1), 41–61.

<sup>15</sup> Council on Environmental Quality. (1997, December 10). *Environmental justice: Guidance under the National Environmental Policy Act*. Retrieved from <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>.

<sup>16</sup> Environmental Protection Agency. (n.d.). *Office of Environmental Justice in action*. Retrieved from [https://www.epa.gov/sites/production/files/2017-09/documents/epa\\_office\\_of\\_environmental\\_justice\\_factsheet.pdf](https://www.epa.gov/sites/production/files/2017-09/documents/epa_office_of_environmental_justice_factsheet.pdf).

<sup>17</sup> Environmental Protection Agency. (n.d.). *Environmental justice*. Retrieved from <https://www.epa.gov/environmentaljustice>.

<sup>18</sup> See Note 12.

<sup>19</sup> Ibid.

<sup>20</sup> Travis Kavulla, former chair of the Montana Public Utility Commission.

<sup>21</sup> *Regulatory agencies* refers to both federal and state agencies who are responsible for addressing EJ.

etc. EJ issues are often addressed by “checking the boxes” and focusing efforts on traditional environmental concerns instead.

The quality of consultation on traditional environmental resources and EJ varies widely and is readily apparent for a hydropower project in Peru using the Hydropower Sustainability Assessment Protocol (HSAP).<sup>22</sup> For each resource, the HSAP rates the performance of an energy developer—values range between “none” and “proven best practice.” So a developer and a regulatory agency can determine gaps in the level of consultation for all resources, including EJ. For example, the lower part of the wheel in **Figure 2** reveals the energy developer had not even met the “basic best practice” level with indigenous peoples yet achieved “proven best practice” levels on cultural heritage and resettlement. The apparent gap in consulting with indigenous people at a minimum should alert the developer and regulatory agency to act.

Figure 2 also demonstrates that the same approaches used to consult on traditional environmental resources can’t be automatically used to effectively engage EJ communities. It takes significantly more consultation, time, and effort to break through cultural and historical barriers that may have developed over decades and attain some modicum of success. Focusing on recognition justice first and then consulting to attain procedural justice and, ideally, distributive justice are necessary. Regulatory agencies and energy developers should recognize decades of mistrust and suspicion harbored by EJ communities cannot be erased overnight.

EO 12898 “lacked requirements that EJ play a determining factor in siting, rulemaking, and permitting decisions.”<sup>23</sup> As opposed to being a priority or at least being equally considered along with other environmental resources, EJ communities and regulations to protect them are more of

a bureaucratic hurdle than a binding federal statute. In other words, as it stands, EJ regulations are oft cited but rarely have a measurable impact on a project’s outcome. An assessment of EO 12898 found that “while federal agencies regularly cite EO 12898 as a basic administrative concern in writing a rule, they less frequently have demonstrated that the Order is relevant to the form and content a final rule takes.”<sup>24</sup> This assessment was published several years after the EO was issued, but the findings continue to apply today. The regulations exist but are rarely used for the actual protection of EJ communities. Two recent projects, the Dakota Access Pipeline (DAPL) and Alaska LNG, that have dealt with EJ communities can be useful for regulatory agencies and energy developers.

### Dakota Access Pipeline

The recent controversy surrounding the DAPL illustrates how other resources are prioritized at the expense of EJ concerns. The pipeline’s route is “less than half a mile” from the Standing Rock Sioux Tribe reservation and also travels underneath the nearby Lake Oahe.<sup>25</sup> Based on the proximity of the reservation as well as fishing and cultural ceremonies associated with the river, DAPL was subject to EJ considerations. However, the US Army Corps of Engineers issued a permit allowing construction underneath Lake Oahe, despite concerns raised by the Standing Rock Sioux and without considering the potential impacts if the pipeline leaked.<sup>26</sup>

In March 2020, the US District Court of the District of Columbia ruled that the Corps needed to perform a new environmental review, because it failed to sufficiently assess EJ pursuant to NEPA. This was a major victory for the Standing Rock and EJ. Nevertheless, the fact that the presiding judge wrote that “the Court thus cannot find that the Corps has adequately discharged its duties” is not a promising sign for the efficacy of EJ regulations.<sup>27</sup> After all, the ideal regulation should not take four years and several court rulings to achieve compliance.

<sup>22</sup> See <https://www.hydrosustainability.org/assessment-protocol>. While the use of the HSAP is not a cure-all, its use by energy developers, EJ communities, and regulators could easily compare how well or poor EJ concerns were being addressed against other resources.

<sup>23</sup> Huang, A. (2014, February 10). *The 20th anniversary of President Clinton’s Executive Order 12898 on environmental justice*. Retrieved from <https://www.nrdc.org/experts/albert-huang/20th-anniversary-president-clintons-executive-order-12898-environmental-justice>.

<sup>24</sup> See Note 14.

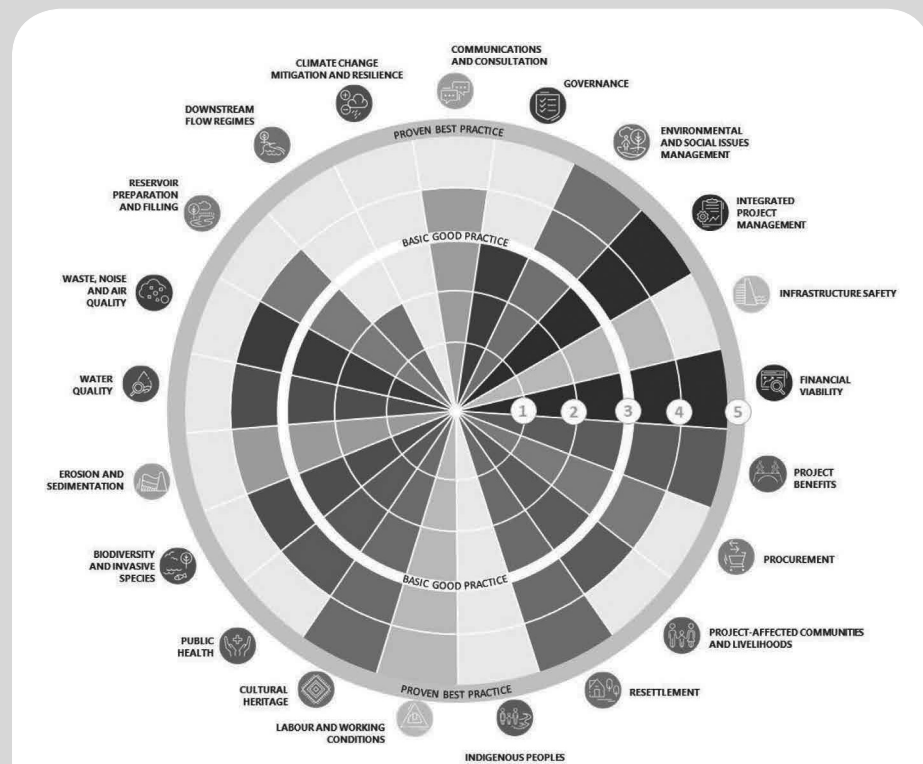
<sup>25</sup> Friedman, L. (2020, March 25). Standing Rock Sioux Tribe wins a victory in Dakota Access Pipeline case. *The New York Times*. Retrieved from <https://www.nytimes.com/2020/03/25/climate/dakota-access-pipeline-sioux.html>.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid



**Figure 2.** Visualization of Consultation and Mitigation Gaps Using the Hydropower Sustainability Assessment Protocol



Source: Hydropower Sustainability Assessment Protocol (Chaglla Project in Peru).

Unfortunately, the NEPA guidance that caused this issue and many like it has not been changed, as the CEQ did not include major EJ reforms in its recent final rulemaking. On July 16, 2020, the CEQ issued final NEPA guidance regulations that take effect September 14, 2020, unless congressional review results in a new effective date or termination of the regulations.<sup>28</sup> The new regulations do not affect the EJ guidance and actually elevate tribal consultation requirements. However, this does not mean the rulemaking is without effects for EJ communities. It must be recognized that speeding up the NEPA review process combined with the current state of EJ regulations will create environmental injustice. Accordingly, the authors believe that under the new NEPA regulations, the Corps would still have to conduct the

analysis due to the probable effects of a pipeline leak under Lake Oahe from the project.

Normally the courts have given broad discretion to federal agency decision-makers to determine the adequacy of the environmental review. The authors believe the courts are taking a much harder look at the technical aspects of the NEPA analysis and are growing weary of NEPA noncompliance issues. Judge James E. Boasberg also implemented a form of recognition justice in a court opinion before rendering his decision with the following statement:

“Since the founding of this nation, the United States’ relationship with the Indian tribes has been contentious and tragic. America’s expansionist impulse in its formative years led to the removal and relocation of many tribes, often by treaty but also by force.” *Cobell v. Norton*, 240 F.3d 1081, 1086 (D.C. Cir. 2001). This case also features what an

<sup>28</sup> Updated NEPA Regulations, <https://ceq.doe.gov/laws-regulations/regulations.html>.

American Indian tribe believes is an unlawful encroachment on its heritage.<sup>29</sup>

In the case of the DAPL, the court criticized the Corps for failing to address the Standing Rock's expert criticism of its analysis, citing issues like potential worst-case discharge, the difficulty of detecting slow leaks, and responding to spills in winter. Similarly, the court observed that the DAPL's parent company's abysmal safety record "does not inspire confidence." On July 6, 2020, the court ruled that the pipeline would have to be shut down, the oil would have to stop flowing, and the pipeline would have to be emptied within 30 days from the date of its order.

### Alaska LNG Project

Another example of the ineffectiveness of EJ regulations can be seen with the Alaska LNG project. FERC prepared a draft EIS to assess the Alaska LNG project. In their draft EIS, FERC found that "adverse impacts on housing, population, and public services could occur in some areas," and that Alaska LNG "could disproportionately affect EJ communities due to impacts on subsistence practices and public health."<sup>30</sup> The draft EIS clearly states that EJ communities could be impacted, thus admitting that environmental injustice could occur, but declares that "these impacts are not expected to be high and adverse" regardless.<sup>31</sup>

With this phrase, FERC misses NEPA and the EJ regulation entirely. NEPA requires an agency to determine the significance of the impacts to the EJ community. Hence, FERC's use of the phrase is ambiguous at best. Just as it did with fish and wildlife impacts and other environmental resources, FERC should have determined the significance of the impact and developed mitigation measures to reduce those impacts and burdens on the affected communities. FERC should have also included those measures as permit conditions when approving the Alaska LNG project.

<sup>29</sup> Civil Action No. 2016-1534, *Standing Rock Sioux Tribe v. United States Army Corps Of Engineers*.

<sup>30</sup> Federal Energy Regulatory Commission. (2019, June 28). *FERC staff issues draft Environmental Impact Statement for the Alaska LNG project*. Retrieved from <https://www.ferc.gov/industries/gas/enviro/eis/2019/06-28-19-DEIS.asp>.

<sup>31</sup> Ibid.

The poor EJ outcome of the Alaska LNG project also lies with the lack of EJ *intensive* consultation by the applicant. The project's developers should have intensely consulted with affected communities during the pre-feed and pre-filing stages of the project and during NEPA scoping sessions. Ideally, that is the time to consider EJ impacts for the Alaska LNG project and any proposed project, as that's when a project's impacts can be reduced or avoided by rerouting the project's pipeline and relocating the liquefied natural gas and gas processing facility.

Furthermore, while the Alaska LNG project presents a clear example of how EJ guidance is bypassed, it also reflects a fatal flaw in the existing EJ guidance—an overreliance on procedural means to achieve EJ without actionizing recognition justice. The Alaska LNG developer and FERC emphasized traditional environmental impacts ahead of people and especially EJ communities. The deprioritization of EJ relative to other environmental concerns becomes clear in the "discretionary space," where the EPA and other decision-making agencies and stakeholders have "consistently overlooked EJ issues in favor of universal coverage."<sup>32</sup>

This issue is not unique to the federal government. California is considered a leader in EJ, having begun its state EJ program in 1999.<sup>33</sup> However, stringent EJ policies have "not necessarily translated into an actual improved environment for vulnerable communities," and even prevented "activists from realizing meaningful improvements."<sup>34</sup>

### POOR IDENTIFICATION OF EJ COMMUNITIES

Arguably the most important part of EJ regulation is the identification of EJ communities, an inherently geographic process. EJ regulation could not occur without first defining and identifying where vulnerable populations exist and what factors affect their environments. Accurately defining and identifying EJ communities must be done to benefit vulnerable populations. However, current practices for identifying EJ communities are

<sup>32</sup> See Note 12.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

ineffective. In fact, according to the Natural Resources Defense Council (NRDC), they are “effectively facilitating environmental injustice,” the opposite of their intended effect.<sup>35</sup>

In its attempt to properly identify EJ communities, the CEQ recommends using data from the Bureau of the Census (BOC).<sup>36</sup> However, the use of census data to identify EJ communities raises serious issues of scale. By using census data, environmental reviews pursuant to NEPA can be “rendered . . . incapable of detecting large [EJ] populations” near a project, “leading to false conclusions about a project’s impact on those communities.”<sup>37</sup>

The average census tract in the United States contains roughly 4,000 people.<sup>38</sup> Depending on the population size and demographics of a tract, a project can be sited seemingly in an area with few EJ concerns, but upon closer examination, this is not the case. Essentially, the universal use of census data as a means of facilitating EJ identification prevents energy developers and regulators from seeing the real impacts of energy projects, especially in areas where EJ populations live in concentrated areas or in rural areas. The recent Atlantic Coast Pipeline case discussed here demonstrates this inability.

### The Atlantic Coast Natural Gas Pipeline

On April 12, 2019, 10 environmental and civil rights groups, including the NRDC and the National Association for the Advancement of Colored People, challenged the approval of the Atlantic Coast Pipeline because of EJ concerns.<sup>39</sup> These concerns were largely based on issues caused by census tract–based analysis. In assessing the impact of a compressor station along the route of the pipeline, FERC as lead

agency for the project used three rural census tracts with predominantly white residents and a total area of 500 square miles.<sup>40</sup> FERC concluded that “none of the three census tracts within one mile of the proposed Compressor Station 2 are designated minority EJ populations.”<sup>41</sup> However, the compressor station was sited in Union Hill, Virginia, an African American community founded by freed slaves.<sup>42</sup> Union Hill’s African American population is 40 percent higher than the county average and 50 percent higher than the state average, and has unique historical significance, but the use of census tract analysis allowed these factors to be ignored. EJ was not considered at all because Union Hill was masked by the large surrounding white census tract.

By assuming that populations are “distributed uniformly throughout vast, sparsely populated areas,” FERC and federal agencies like it can “erase” or “bury” EJ communities like Union Hill.<sup>43</sup> What is even worse, even ACP’s backers, Dominion Energy and Duke Energy, would have been convinced by the census data that they were compliant. Had they not been, they may have seen the need to work harder with the EJ community to find solutions. Unfortunately, this phenomenon is not unique to the Atlantic Coast Pipeline project.

### Southeast Market Pipelines Project

In 2017, the Southeast Market Pipelines Project, a proposed network of three natural gas pipeline projects across the Southeastern United States, faced similar criticism for using “broader population data to determine that [a] compressor station was in a majority-white US Census tract, rather than looking more closely at the majority-black community directly neighboring the project.”<sup>44</sup> In this case, FERC did not assess impacts on a black community in Albany, Georgia, where a

<sup>35</sup> Natural Resources Defense Council. (2019, April 15). *Legal brief: FERC’s flaws endanger communities of color in Atlantic Coast Pipeline path*. Retrieved from <https://www.nrdc.org/media/2019/190415>.

<sup>36</sup> See Note 15.

<sup>37</sup> Emmanuel, R. (2017). Flawed environmental justice analyses. *Science*, 357, 260. Retrieved from [https://www.researchgate.net/profile/Juan\\_Laclette/publication/318577080\\_Mexico’s\\_basic\\_science\\_funding\\_falls\\_short/links/59b6b008aca2722453a46720/Mexicos-basic-science-funding-falls-short.pdf](https://www.researchgate.net/profile/Juan_Laclette/publication/318577080_Mexico’s_basic_science_funding_falls_short/links/59b6b008aca2722453a46720/Mexicos-basic-science-funding-falls-short.pdf).

<sup>38</sup> US Census Bureau. (n.d.). *Census tracts*. Retrieved from <https://www2.census.gov/geo/pdfs/education/CensusTracts.pdf>.

<sup>39</sup> See Note 35.

<sup>40</sup> Ibid.

<sup>41</sup> Natural Resources Defense Council. (n.d.). *Census geography in Buckingham County, VA*. Retrieved from <https://www.nrdc.org/sites/default/files/ferc-amicus.png>.

<sup>42</sup> See Note 35.

<sup>43</sup> See Note 41.

<sup>44</sup> Gilmer, E. (2017, April 19). FERC’s environmental justice, climate review scrutinized. *E&E News*. Retrieved from <https://www.eenews.net/stories/1060053253>.

compressor station for one of the pipelines was sited.<sup>45</sup> Again, census data was used to obscure the realities of EJ needs by “erasing” or “burying” EJ populations. These cases show how following and using census data to identify EJ communities are dramatically failing regulators and energy developers as well.

### **FERC’s Approval of LNG Export Terminals in Texas**

FERC approved three LNG export projects on November 21, 2019: Texas LNG Brownsville, Rio Grande LNG Terminal and the associated Rio Bravo Pipeline Project, and the Annova LNG Brownsville Project in the Brownsville, Texas area.<sup>46</sup> EJ communities within the project areas are made up of low-income residents, shrimpers, in the cities of Port Isabel, South Padre Island, and Laguna Vista. The Sierra Club and its EJ community clients opposed the projects before FERC and the Texas Commission on Environmental Quality for EJ and environmental reasons.<sup>47</sup>

In its decision, FERC appears to downplay the effects of these industrial facilities on the EJ communities. Instead, it discusses the benefits that may accrue to the EJ communities in Cameron County from construction and operation of the projects.

Commissioner Glick’s dissent recognized the benefits that jobs and economic stimulus that a facility like the Rio Grande LNG project can provide may be especially important in a community facing economic challenges. However, his dissent, which considered recognition justice, stated, “We cannot lose sight of the cumulative environmental toll on regions, like Cameron County, from the development of new industrial facilities.”<sup>48</sup>

<sup>45</sup> Ibid.

<sup>46</sup> Federal Energy Regulatory Commission. (2019, November 21). *FERC approves four LNG export projects*. Retrieved from <https://www.ferc.gov/news-events/news/ferc-approves-four-lng-export-projects>.

<sup>47</sup> Sierra Club. (2020, January 24). *FERC decision on Brownsville LNG facility upends environmental justice*. Retrieved from <https://bit.ly/3f6HZzU>.

<sup>48</sup> Glick, R. (2019, November 21). *Commissioner Richard Glick dissent regarding Rio Grande LNG, LLC*. Docket Nos. CP16-454-000, CP16-455-000. Retrieved from <https://www.ferc.gov/news-events/news/commissioner-richard-glick-dissent-regarding-rio-grande-lng-llc>.

### **British Columbia and the Approval of Shell’s LNG Canada Export Project**

In Canada, British Columbia and its Oil and Gas Commission approved the Shell LNG Canada export project. The process used in BC and by Royal Dutch Shell can be used as a benchmark of best practices, when compared to experiences in the United States and other parts of the world. The authors believe BC’s commitment to true, lasting reconciliation with indigenous peoples through adopting and implementing the UN Declaration on the Rights of Indigenous Peoples and the Calls to Action of the Truth and Reconciliation Commission constitutes a strong acknowledgment of the indigenous First Nations (i.e., recognition justice with respect to LNG and natural gas infrastructure).<sup>49</sup> The province’s clear commitment to EJ has raised the bar for Royal Dutch Shell and other LNG and natural gas developers in the province. While not all of the First Nations approve of BC’s efforts or proposed projects, progress has been made and the levels of litigation by First Nations are relatively low compared to EJ community litigation in the United States.

As part of those commitments, BC works with developers and First Nations to sign benefit agreements to ensure that affected EJ communities within the province receive workforce training, jobs, and other benefits while also protecting the environment. BC and Shell Canada have signed a benefits agreement with the Haisla Nation to construct an LNG facility and marine shipping terminal on their territory in Kitimat.

More than 90 percent of First Nations in BC have signed benefit agreements along proposed northern pipeline routes. This includes 63 agreements with 29 First Nations for the following proposed natural gas pipeline projects: (a) Prince Rupert Gas Transmission, (b) Coastal GasLink, (c) Pacific Trail Pipeline, and (d) the Westcoast Connector Gas Transmission project.<sup>50</sup> With the exception of a small

<sup>49</sup> British Columbia. (n.d.). *Indigenous people and LNG*. Retrieved from <https://www2.gov.bc.ca/gov/content/industry/natural-gas-oil/lng/indigenous-peoples-and-lng>.

<sup>50</sup> Ibid.

group of dissidents within the Wet'suwet'en that has attempted to block the Coastal Gas-Link pipeline, Royal Dutch Shell managed to secure agreements with every First Nation along the pipeline corridor.

GREEN ENERGY EFFECTS ON ENVIRONMENTAL JUSTICE COMMUNITIES

All forms of energy development and infrastructure, including green or renewable energy, can adversely affect EJ communities by varying degrees. As shown in **Table 1**, the six themes or issues faced by EJ communities reflect a “cradle-to-grave” approach borrowed from the Resource Conservation and Recovery Act tagline.<sup>51</sup>

When examining every type of energy project’s effect on EJ, it’s evident that all will affect EJ communities throughout the life of the project. Table 1 should assist regulatory agencies and energy developers to develop mitigation measures either to avoid or minimize those

<sup>51</sup> 42 U.S.C. § 6901 (2006) (referring to the Resource Conservation and Recovery Act that was passed in 1976, which, amongst other things, focuses on hazardous waste disposal through a “cradle-to-grave” approach—meaning that hazardous waste is controlled from its point of generation to its point of disposal); Paben, J. M. Z. (2014). Green power & environmental justice—Does green discriminate? *Texas Tech Law Review*, 46, 1067. Retrieved from [http://texastechlawreview.org/wp-content/uploads/Vol.-46-Book-4.Paben\\_.PUBLISHED.pdf](http://texastechlawreview.org/wp-content/uploads/Vol.-46-Book-4.Paben_.PUBLISHED.pdf).

impacts. Wind and hydropower appear to have the fewest impacts on EJ communities. However, Table 1 overlooks the fact many tribal and indigenous people live in rural areas where wind, solar, hydropower, and electric transmission line projects may be proposed. In 2018, EJ community conflicts existed at 31 wind and 326 water infrastructure projects.<sup>52</sup>

In contrast, solar and electric storage, praised for their emission-free characteristics, have adverse effects on EJ communities from cradle to grave.<sup>53</sup> While high-voltage electric transmission lines (greater than 220 kilovolts) are not reflected in Table 1, the authors believe their impacts will be similar to natural gas pipelines without contaminating sites and the transportation of raw materials and waste.

EXAMPLES OF WIND AND SOLAR PROJECT IMPACTS ON EJ COMMUNITIES

United States

EJ communities have opposed land-based and offshore wind projects in the United

<sup>52</sup> Snorek, J. (2018, June 4). Tracking the battles for environmental justice: Here are the world’s top 10. *The Conversation*. Retrieved from <https://theconversation.com/tracking-the-battles-for-environmental-justice-here-are-the-worlds-top-10-97616>.

<sup>53</sup> See Note 3.

Table 1. Environmental Justice Themes and Issues of Traditional and Green Energy Projects

	Siting of Polluting Facilities	Unequal Pollution Regulation	Contaminated Sites	Disposal of Hazardous Waste	Raw Material Development	Transportation of Raw Materials and Waste
Wind	X					X
Solar	X	X	X	X	X	X
Biomass	X	X	X	X	X	
Hydroelectric	X					X
Coal	X	X	X	X	X	X
Oil and Gas (Petro)	X	X	X	X	X	X
Natural Gas	X	X		X	X	X
Nuclear	X	X	X	X	X	X

Source: Modified from Paben, J. M. Z. (2014), Green power & environmental justice—Does green discriminate? *Texas Tech Law Review*, 46, 1067. Retrieved from [http://texastechlawreview.org/wp-content/uploads/Vol.-46-Book-4.Paben\\_.PUBLISHED.pdf](http://texastechlawreview.org/wp-content/uploads/Vol.-46-Book-4.Paben_.PUBLISHED.pdf).

States and abroad for aesthetic, cultural, and economic reasons.<sup>54</sup> Opposition to onshore wind projects will increase as projects change the existing land use to industrial energy production, which often does little to benefit the local communities over the long term.

Also, as the number and size of wind turbines become more common, wind farms will require more land and might have greater impact on EJ communities. The overall land requirements of some of the largest wind farm projects abroad range from 250 acres in Colombia to over 25,000 acres in Sweden (**Figure 3**). Opposition will also likely increase in the United States under the potential Biden-Sanders plan to build 60,000 wind turbines in the United States; for perspective, there were 58,000 wind turbines operating in the United

States in 2019.<sup>55</sup> Adding another 500 million solar panels might also result in increased EJ conflicts, as solar projects require large parcels of land. For example, the state of Kansas supports wind power but prohibits wind turbines in the special viewsheds such as the Flint Hills tall grass prairie.<sup>56</sup> Specific local town ordinances prohibit the installation of commercial wind turbines in the area.

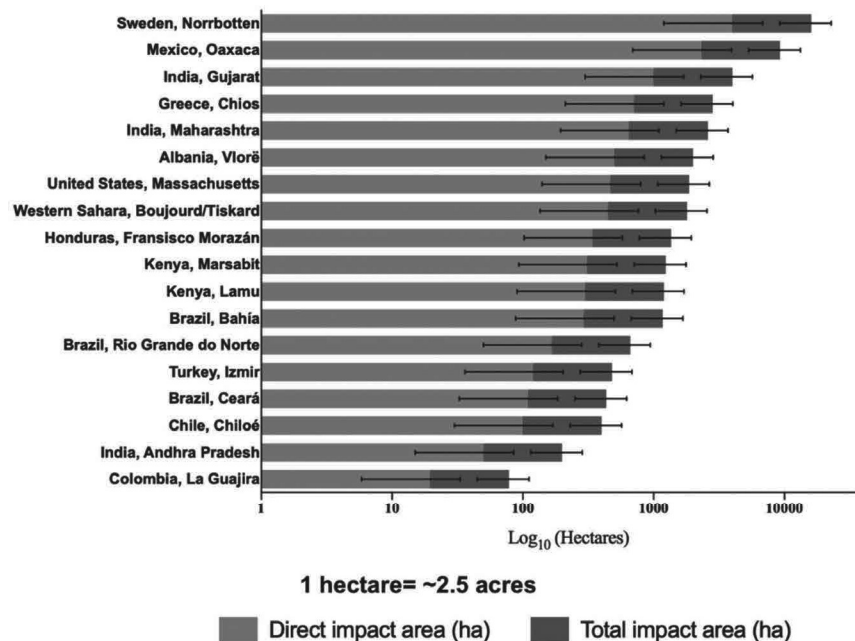
In the United States, the Quechan Tribe of Fort Yuma Indian Reservation has filed a lawsuit against the Department of the Interior (DOI) for a 10,000-acre wind farm and

<sup>54</sup> Avila, S. (2018). Environmental justice and the expanding geography of wind power conflicts. *Sustainability Science*, 13, 599. doi: 10.1007/s11625-018-0547-4.

<sup>55</sup> US Geological Survey. (n.d.). *How many turbines are contained in the U.S. Wind Turbine Database?* Retrieved from [https://www.usgs.gov/faqs/how-many-turbines-are-contained-us-wind-turbine-database?qt-news\\_science\\_products=0#qt-news\\_science\\_products](https://www.usgs.gov/faqs/how-many-turbines-are-contained-us-wind-turbine-database?qt-news_science_products=0#qt-news_science_products).

<sup>56</sup> Outka, U. (2012, Summer). Environmental justice issue in sustainable development: Environmental justice in the renewable energy transition. *Journal of Environmental and Sustainability Law*, 19(1), Article 5.

**Figure 3.** Inventory of Conflicts With Wind Energy Impact Area and Total Impact Area



Source: Modified from Avila, S. (2018). Environmental justice and the expanding geography of wind power conflicts. *Sustainability Science*, 13, 599. doi: 10.1007/s11625-018-0547-4.

a 6,000+-acre solar project. The tribe claimed in both cases that the projects would destroy “culturally and visually significant lands and resources.” One common thread in the EJ opposition is that the projects would benefit electricity consumers at the expense of tribal members. In other words, EJ communities are unwilling to carry the burden of green projects simply because they don’t perceive any benefits to their communities over the operation of the projects.

## Europe and the Americas

Two conflicts in southeastern Europe constitute cases of rural and peri-urban communities mobilizing against the impacts of large-scale wind energy projects. The first case was on the island of Chios, Greece, where seven wind farms led to the organization of a local movement: Chios’ Citizens against Windmills. The movement noted that the shift to wind power would do little for the island, but instead would supply continental Greece through expensive submarine cables.<sup>57</sup>

The combination of conservationist values and critical narratives were also expressed within EJ communities of the Karaburun region in Turkey. The community there stated, “This is about our nature, all living beings, the health of the people and our future. We will not allow them to turn our beautiful peninsula into an industrial energy zone in the name of ‘green energy’ in this illegal way.”

The Isthmus of Tehuantepec in Mexico has attracted private wind energy investors. The isthmus, where the Ikoots indigenous people live, has wind resource potential that is among the world’s best. In 2013, Mareñas Renovables formed focus groups to gain input from the local residents on a proposed wind farm. The Zapotecs and Ikoots focus groups argued that installing 132 V90–3.0 MW turbines on the Barra (Key) would have an adverse “environmental impact, specifically destroy[ing] the ecology of the area which the residents relied

on for their livelihood.” The focus groups were also concerned that the construction might destroy sacred sites and cemeteries. The concern was encapsulated by the following statement from a fisherman at San Mateo del Mar<sup>58</sup>:

We live by catching shrimps at *Laguna Inferior* [Lower Lagoon], the shrimps eat from the leaves that fall from the trees at the *Barra* [Key], if they [wind firm] install these *ventiladores* [wind turbines], there will be no more trees . . . and so no more shrimps.

In 2013, there were disputes among indigenous peoples, Mareñas Renovables representatives and government officials regarding construction of 102 wind turbines on the Key and 30 wind turbines in Santa María del Mar. Apparently fuel was disposed of in the surrounding waters, and a judge later cancelled the project and investors withdrew their support.

## PASSAGE OF EJ LEGISLATION AND ENFORCEMENT ON THE HORIZON

In the future, energy developers and federal regulatory agencies may face greater scrutiny regarding their efforts to implement EJ efforts if the House Select Committee’s Report on the Climate Crisis goes forward.<sup>59</sup> The report recommended amending the Civil Rights Act to protect victims of environmental and climate injustice and to also strengthen and increase the amount of EJ enforcement action. The plan also recommends doubling the EPA’s enforcement budget and directing the agency to make environmental and climate justice one of its enforcement and compliance assurance priorities. Even if these changes were not implemented, energy developers and federal agencies will likely face increased levels of conflict with EJ communities and the litigation and delays that result. This will ultimately slow the change to a greener electric sector and efforts to fight climate change.

<sup>57</sup> Environmental Justice Atlas. (2016). *Movement against industrial renewable energy resources (RES) in Chios, Greece*. Retrieved from <https://ejatlas.org/conflict/movement-against-industrial-renewable-energy-resources-res-in-chios>.

<sup>58</sup> Ramirez, J. (2019). *Wind energy farms’ impacts on environmental justice and human rights*. CBDS Working Paper Series. Retrieved from [https://www.cbs.dk/files/cbs.dk/jacobo\\_cbd\\_wp\\_1-2019.pdf](https://www.cbs.dk/files/cbs.dk/jacobo_cbd_wp_1-2019.pdf).

<sup>59</sup> See Note 1.

## RECOMMENDATIONS

The following actions would achieve the spirit of the EJ guidelines and help ensure a fair distribution of the benefits and burdens to EJ communities:

1. Regulatory agencies should give equal consideration to EJ issues just as they do with other important environmental resources. Agencies can elevate consultation with EJ communities by designating energy developers (applicants) as their nonfederal representative for purposes of NEPA consultation on EJ matters. This administrative action can result in *intensive* consultation regarding EJ issues, and not just “checking the boxes.” This action has been common practice at FERC with hydropower licensing under 18 CFR § 5.5(e) for consultation required under the Endangered Species Act and National Historic Preservation Act.
2. Regulatory agencies should revise their guidance on preparing applications to include a resource section on environmental justice to identify the community, anticipated impacts, and proposed mitigation to avoid or reduce impacts to acceptable levels. Applicants should include this in the project application even in the absence of agency guidance and engage the EJ communities potentially affected by the project.
3. The EPA and CEQ should revise the EJ guidance to require census data to be a first but not final step in identifying potentially affected EJ communities. This can be done by using geographic distance from a particular project site.
  - a. In the interim, applicants should focus their efforts to identify and *intensely* consult with EJ communities very early in the project development cycle. The results of such consultation should inform the design of the project and location so as not to adversely affect any EJ community. Any projects that will be sited near or in EJ communities should identify measures to mitigate project effects during the life of the project.
  - b. Applicant or lead agency mitigation should include but not be limited to: jobs

and training during project construction and operation, relocating/rerouting or burying/screening infrastructure, directly offering the affected community a share in the project benefits, and the establishment of an EJ resource fund to support community programs in the project area.

4. Energy developers should strongly consider sharing decision-making on aspects of the project that directly affect the EJ community.
5. Require the lead agency and applicant to strongly rely on EJ community communications and focus groups in lieu of census data at the pre-filing stage—in the early stages when projects are being designed and applications are being developed for submittal to the lead agency.
6. Lead agency staff should engage with EJ communities during the NEPA scoping process and during site visits and scoping meetings and create a level playing field to ensure EJ concerns are given equal consideration.
7. Regulatory agencies and applicants should make every attempt to facilitate dispute resolution with EJ communities, including deploying agency dispute resolution specialists.

## CONCLUSION

Since EJ emerged as a social movement in the 1980s, it has had a mixed record of success. Early regulatory successes came in the form of EO 12898, CEQ guidance, and EJ considerations under NEPA, but these successes have not lived up to their full potential. EJ considerations continue to be little more than an administrative concern instead of a legitimate regulatory consideration for federal agencies and energy developers. Agencies and energy developers appear to be unable to successfully implement recognition EJ, which undermines procedural and distributive EJ. The results have adversely affected EJ communities, energy developers, and agencies alike. The acceleration of renewable energy projects, especially under a scenario such as the Biden-Sanders plan, might increase the number of EJ conflicts if current EJ guidance to federal agencies and energy developers is not revised. 