

Expert Dialogue

# A Framework for the Green Real Deal



Photo credit: Global Energy Initiative

“The principles of the Green Real Deal are designed to foster a broad coalition and turn climate ambitions into meaningful action,” said **Ernest Moniz**, former Secretary of Energy, now CEO of the Energy Futures Initiative. “The Green New Deal, a congressional resolution,... while it has helped shine an important spotlight on the climate crisis, elements of the resolution—such as going to zero carbon in a 10-year time frame—are largely impractical.... The principles of the Green Real Deal are designed to foster a broad coalition and turn climate ambitions into meaningful actions.”

[OurEnergyPolicy](http://www.ourenergypolicy.org)’s community of energy professionals discussed Dr. Moniz’s Green Real Deal, highlighting both its strengths and weaknesses, and emphasizing the importance of decarbonizing all energy sectors, building broad and inclusive coalitions, incorporating social equity, and taking the best approach for innovation. This document features detailed excerpts from that discussion (bold added for emphasis). Access this document at <http://bit.ly/2V6pwrs> and read the entire discussion at <https://www.ourenergypolicy.org/a-framework-for-the-green-real-deal>.

## Context

Dr. Moniz’s Green Real Deal is an “actionable framework for meeting deep decarbonization of energy and associated systems by midcentury in ways that minimize costs, maximize economic opportunities, accelerate solutions, and promote social equity,” according to the [Green Real Deal framework document](#).

The framework was released in July 2019 by the Energy Futures Initiative, of which Moniz is the founder and CEO. It is composed of five broad-based principles (listed below) and eight high-level key elements, “designed to provide policymakers, stakeholders, and industry with the context and building blocks for prioritizing, selecting and implementing energy policy, technology and business model innovations to effectively accelerate economy-wide decarbonization” ([p. 8](#), *The Green Real Deal: A Framework for Achieving A Deeply Decarbonized Economy*).

The plan is not necessarily meant to counter Congresswoman Alexandria Ocasio-Cortez’s Green New Deal, but it was intended to garner support across political parties and be “based on practicality, not ideology,” as Moniz and Karsner stated in the [CNBC editorial](#).

## Principles of the Green Real Deal:

1. Technology, Business Model, and Policy Innovations Are Essential
2. Broad and Inclusive Coalitions Must Be Built
3. Social Equity is Essential for Success
4. All GHG-Emitting Sectors Must Be Addressed in Climate Solutions
5. Optionality and Flexibility are Needed for Technologies, Policies, and Investments

## 1. Green Real Deal Strengths

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**Captures the essential elements**

“Once again, as he did as Secretary of Energy, **Ernie Moniz has hit the nail on the head**. All five bullets succinctly capture the essential elements for reducing America’s carbon footprint.” [Full Comment](#)

– [Mike Lubell](#), *Professor of Physics, City College of the City University of New York*

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**Includes carbon emission in all sectors, metrics, states**

“There is a **great deal to like in the Green Real Deal**. It...**includes a number of important elements**: attention to carbon emissions across all sectors; quantifiable metrics for progress; and a federal action to encourage and open opportunities for states to forge ahead....” [Full Comment](#)

– [Daniel Kammen](#), *Distinguished Professor of Energy, University of California*

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**Provides a roadmap**

“Thank you, Secretary Moniz. Your framework is salutary, because it **provides a roadmap for operationalizing some of the broader principles** of various incarnations of the GND [Green New Deal]. I am particularly heartened by your proposals for R&DD [research, development, and demonstration] for carbon removal technologies....” [Full Comment](#)

– [Wil Burns](#), *Co-Executive Director, The Institute for Carbon Removal Law and Policy, American University*

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## 2. Green Real Deal Weaknesses

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**Misperception that fast change is more expensive than slow change**

“The [Green Real Deal] study is **correct to emphasize the need for a combination of incremental and breakthrough technologies**, with the former enabling the latter... [but this] has the **unfortunate and unintended consequence of reinforcing the public misperception that moving to cut emissions is more expensive than moving slowly**, when the speed in question is the scaling of disruptive, 100% clean technologies....” [Full Comment](#)

– [Carl Pope](#), *Former Executive Director, Sierra Club*

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**Name is confusing**

“I have two criticisms of his portrayal. The first is the name; **readers will not grasp the difference between his Green Real Deal and AOC’s [Alexandria Ocasio Cortez’s] Green New Deal**, which Republicans have cast as a new rise of socialism. Let’s get the word ‘deal’ out of the program. There are many other words, too numerous to list, that would be far better.” [Full Comment](#)

– [Mike Lubell](#), *Professor of Physics, City College of the City University of New York*

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**Does not emphasize global action enough**

“Ernie’s list does not address the criticism that **whatever we do, won’t matter enough unless the rest of the world takes strong action, too....** When I look at the energy and climate change landscape, I see three roles for public policy: taxation, regulation, and innovation. At some point the first two will be essential, but the political climate is presently too polarized to implement them. We should focus on the third....” [Full Comment](#)

– [Mike Lubell](#), *Professor of Physics, City College of the City University of New York*

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### 3. All-Sector Decarbonization

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*The Green Real Deal emphasizes the need to decarbonize all sectors of the economy: “Much of the academic and policy carbon abatement work to-date has focused on the electricity sector. Electricity is, however, only 28 percent of U.S. emissions.... Reaching economy-wide emissions reductions targets will require progress in every sector of the economy, including those that are difficult to decarbonize due technical, cost, and performance barriers.” (p. 10 of Green Real Deal framework document)*

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#### Pursue cheapest decarbonization opportunities

“I especially appreciate the principle of focusing on ‘all GHG emitting sectors.’ Something we’ve been increasingly seeing in the power planning community is **environmental groups pushing so strongly for decarbonization of electricity that they are ignoring other means of carbon abatement that would be much cheaper.** Carbon is carbon, and if a given marginal reduction in emissions **can be achieved more cost-effectively in one sector than another, we should be pursuing the cheapest opportunities first.**” [Full Comment](#)

– [Brent Nelson](#), Senior Energy Consultant, Ascend Analytics

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#### Transportation & buildings also important

“Excellent plan. **I agree that it must be all-sector**... not only [the electricity sector], but the **transportation** sector and the **buildings** sector.” [Full Comment](#)

– [James Conca](#), Senior Scientist, UFA Ventures, Inc.

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#### Define pathways for all sectors, and include telecommunications

“I would say [this is] the most important of your principles to get things moving in the right direction.... **The United States needs to clearly define what path needs to be taken in each sector of the economy:** electric power, transportation, industry, residential/commercial buildings, agriculture, **and I would add telecommunications** (broadband infrastructure to substitute for transportation and enable smart grids for effectively managing clean energy supply/demand).” [Full Comment](#)

– [Henry Goldberg](#), Consultant, Independent

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### 4. Coalition Building

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*The Green Real Deal calls for “building broad coalitions from disparate parts of society” (p. 28), which will “put wind in the sails of meaningful action” (p. 10).*

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#### Must engage with those who do not agree to create wide-scale change

“We have to truly embrace the idea of 'broad and inclusive,' and **move our conversations and engagements beyond our usual group of supportive suspects.** Continuing to work with those who are already in philosophical alignment with us is not going to get us the advances we need. This will be very challenging work, but we **must reach out to those who aren't in our comfortable group** and begin engaging them in conversation. This is how we will create meaningful, wide-scale change....” [Full Comment](#)

– [Sabrina Cowden](#), CEO, Milepost Consulting

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## 4. Coalitions Building (cont.)

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Need set of shared goals and momentum that are created by coalitions

“Of the five principles, **I would argue that the most important is #2: Broad & Inclusive Coalitions Must be Built.** In order to have any chance of passing a meaningful carbon price, or getting people to make significant changes in their energy use, or pressuring companies to adopt sustainable practices, **there needs to be a set of shared goals and sustained energy to achieve those goals. That will only happen when we have built coalitions** who represent the majority of citizens, states, countries, businesses, governments, and other institutions. **Building strong coalitions will enable us to pass good policies, ensure that social equity is kept in the forefront, and address all sectors of the economy and society.**” [Full Comment](#)

– [Jason Dedrick](#), Professor, Syracuse University, School of Information Studies

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Bipartisan coalition can go beyond visionary statements

“It definitely makes sense to **establish a bipartisan coalition** that aims to do this and go beyond the ‘Green New Deal’ visionary statements that lack policy prescriptions and achievable timelines.” [Full Comment](#)

– [Henry Goldberg](#), Consultant, Independent

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## 5. Social Equity & Environmental Justice

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*The Green Real Deal approaches social equity as a commitment to transforming the energy system in a way that improves lives and provides meaningful, well-paying jobs (p. 8). It mentions that environmental justice should be considered in the siting of new energy infrastructures or the repurposing of existing assets, and that it is already a consideration in various forms of technical and financial assistance to lower-income households (p. 22).*

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Build systems with social equity as a component instead of adding it in later

“We have an opportunity to **build a solution (or suite of solutions) with equity as an embedded, structural component.** This is a sea change from how we are addressing equity issues at present: trying to bring equity into systems and solutions that are already in place and may have inherent and/or unintended inequities built into their design DNA. Keeping social equity as a non-negotiable piece of the Green Real Deal will create change around energy—and as a vector to other areas of social equity as well.” [Full Comment](#)

– [Sabrina Cowden](#), CEO, Milepost Consulting

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Social equity related to coal communities and job loss is hard to solve

“I think the **biggest challenge lies with the social equity principle.** Coal plant and coal mine closures utterly decimate the communities where they are located—**loss of job opportunities (both high skill and low skill), tax base, and population. These things are hard to replace,** and people don’t often want to relocate. Job re-training and educational programs are easier said than done. Sadly, there’s no magical ‘job creation and economic development’ wand...if only there were.” [Full Comment](#)

– [Brent Nelson](#), Senior Energy Consultant, Ascend Analytics

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## 5. Social Equity & Environmental Justice (cont.)

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**Environmental justice should have a key role in any realistic climate plan**

“Of particular importance is the recognition in the GRD [Green Real Deal] of the **key role of environmental justice in any realistic plan moving forward**. While the GRD is a high-level outline, this area requires more specifics to move beyond (good) rhetoric. A **carbon fee and dividend**, as Dan Miller eloquently outlines, **can be a vehicle for social equity, as can targeted initiatives to make the benefits of future action far more progressive**. E] [environmental justice] is not simply about correcting past injustices, but about how to **bring the benefits of clean energy to under-served populations that will not benefit unless past regressive frameworks are removed**. In a recent study, we found that rooftop solar is far less prevalent in minority communities even when we control for income (Sunter, Castellanos & Kammen, 2019). This has obvious solutions in very direct efforts to implement **solar & EV access, and community-based storage** (Kittner, Lil & Kammen, 2017) as part of prioritized programs for low-income Americans, something that should be a top priority effort.” [Full Comment](#)

– [Daniel Kammen](#), Distinguished Professor of Energy, University of California, Berkeley

## 6. Innovation

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*The Green Real Deal rests on “a strong, ongoing commitment to and reliance on innovation” (p. 10) and states that “Innovation is at the core of the Green Real Deal” (p. 16). Innovations include technologies, business models, and policies. The focus is on reducing the cost of current technologies and aggressively pursuing programs with breakthrough potential.*

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**Innovation is essential**

“Of [the] five principles, **innovations (in technology, business, and policy) are by far the most important** and social equity appears to be the most difficult to legislate. **Without timely, meaningful, and productive innovations** in technology, business, and policy (and the essential leadership), **the principles of coalitions, social equity, inclusiveness, and flexibility can’t do much at all...**” [Full Comment](#) Concerning innovations in business models, I feel this is needed as much as in technology.” [Full Comment](#)

– [Brian Gallagher](#), Managing Member, Ecotonics, LLC

**Innovation focus should not be an excuse for inaction**

“Add talk about innovation being at the core of a solution, and my alarm meter rings. This all begins to sound exactly like the kind of smooth verbal wrapping a politician would put around a package that **amounts to ‘throw some funding at research, and carry on as usual.’** I am *not* saying that that’s what the Green Real Deal amounts to....I have respect for Dr. Moniz’ motives and competence. But... given that the Green Real Deal is positioned as a pragmatic alternative to the Green New Deal, **I’m pretty sure that that interpretation will crop up...**” [Full Comment](#)

– [Roger Arnold](#), Systems Architect, Silverthorn Engineering



## 6. Innovation (cont.)

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### Innovation focus should not be an excuse for inaction

“I agree with the importance of innovation, but that’s like being in favor of apple pie. Everyone loves innovation. But I’d argue that **waiting for radical new innovation to solve the climate problem is dangerous. There are plenty of proven technologies that are not being widely adopted** or integrated into our economic and social systems.... We need utilities to integrate renewables with storage and demand response to squash the duck curve, rather than wait for a new generation of advanced nuclear plants or economical CCS to be ready.... **None of these actions requires new technology**—just improving, deploying and integrating existing knowledge and changing practices in creative ways....” [Full Comment](#)

– [Jason Dedrick](#), Professor, Syracuse University, School of Information Studies

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### Need innovation for complete decarbonization

“I agree with your point that we need to **embrace the technologies that have** already shown to lower carbon dioxide emissions. There isn’t enough time to develop or deploy many new, major break-through technologies by 2030, a date some states such as California have set for significant emissions reductions.... However, **when we talk deep decarbonization** and the net-zero goal in the context of 2050, **we are going to need new technological breakthroughs.**” [Full Comment](#)

– [Ernest J. Moniz](#), President and CEO, Energy Futures Initiative

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### Incremental tech breakthroughs shouldn’t give perception that incremental progress is best

“The [Green Real Deal] study is **correct to emphasize the need for a combination of incremental and breakthrough technologies**, with the former enabling the latter... [but this] has the **unfortunate and unintended consequence of reinforcing the public misperception that moving to cut emissions is more expensive than moving slowly**, when the speed in question is the scaling of disruptive, 100% clean technologies....” [Full Comment](#)

– [Carl Pope](#), Former Executive Director, Sierra Club

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### Include NSF grants in technology development plans

“The last existential threat of World War II was defeated by innovations in the exact same sectors through superb leadership and the unified will of our people, so we can certainly do it again.... Perhaps an expanded super **NSF [National Science Foundation] type of grant program** would help in developing great innovations....” [Full Comment](#) “DOE [The U.S. Department of Energy] is certainly the premier energy R&D [research and development] funding organization and provides excellent oversight services and awards, especially for large companies and big universities, but primarily through formal solicitations.... NSF has a very broad interest in almost any good scientific research including high-risk areas but leading to commercialization. **I feel that a good look at their funding and management system would be helpful for the GRD [Green Real Deal].**” [Full Comment](#)

– [Brian Gallagher](#), Managing Member, Ecotonics, LLC

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## 7. Suggested Additions to the Green Real Deal

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### Stop shutting down nuclear power

**“We have to stop shutting perfectly-well-functioning nuclear plants.** Obviously, if there is real ‘risk’ of some sort of meltdown or leakage or other catastrophe, those plants would be exceptions. But they are now closing because they are ‘uneconomic,’ **made that way by the combination of cheap fracked gas & a lack of carbon taxing.** (No, it isn’t the cheap renewables... Fossil fuels compete with nuclear for baseload power.)” [Full Comment](#)  
– [Mike Shatzkin](#), *Founder and CEO, The Idea Logical Company, Inc.*

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### Do not subsidize old coal & nuclear, reward entrepreneurship

“Dr. Moniz, as always, is **right on target with the principles**, but **misses one important one**... in two parts: (1) **Do not subsidize old uneconomic applications**, which puts a price and safety burden on ratepayers and society. Old coal plants and aging nuclear plants that are over-extended are just going to create huge safety, security, economic costs, and environmental risks.... (2) **Do create an economic environment that rewards entrepreneur-ism, doers, developers**—to not only scale-existing technologies especially in high-value energy efficiency, the entire portfolio of renewable energy, and the array of energy storage applications—but create and encourage regulations, policies, and lure innovative capital to accelerate and scale these cost-effective options....” [Full Comment](#)  
– [Scott Sklar](#), *Distinguished Professor of Energy, University of California, Berkeley*

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### Add climate removal technologies

“We need to **add climate restoration** to our list of objectives. It isn’t just slowing or stopping putting CO<sub>2</sub> in that matters; we also have to take CO<sub>2</sub> out.” [Full Comment](#)  
– [Mike Shatzkin](#), *Founder and CEO, The Idea Logical Company, Inc.*

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### Add carbon-smart agriculture

**“Carbon-smart agriculture needs a far more prominent role.** Farmers across the U.S. can be **rewarded for biological carbon sequestration**, arguably at far greater benefit to cost than CCS efforts.” [Full Comment](#)  
– [Daniel Kammen](#), *Distinguished Professor of Energy, University of California, Berkeley*

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### Move away from natural gas

“Finally, and certainly controversially for many, **natural gas projects need policy or financial leverage to eliminate them completely** in favor of what is core to the Green New Deal. The price, performance, and systems benefits of **a far more aggressive transition to renewables is needed** to reclaim the lost decades, to say nothing of the dark past few years of misguided federal action.” [Full Comment](#)  
– [Daniel Kammen](#), *Distinguished Professor of Energy, University of California, Berkeley*

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The quotes in this document are excerpts from comments posted October 8-November 1, 2019, in the online discussion, "[A Framework for the Green Real Deal](#)," by registered members of OurEnergyPolicy's energy professionals community. Access this document at <http://bit.ly/2V6pwrs>.



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