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Alternative Energy & Power 2023

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USA: Trends and Developments

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Trends and Developments

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Bradley Arant Boult Cummings LLP is a national law firm with a global perspective and over 150 years of experience. It has more than 620 attorneys serving established regional, national and international companies, emerging businesses and individuals. Its offices – strategically located in Alabama, Florida, Georgia, Mississippi, North Carolina, Tennessee, Texas and the District of Columbia – provide an extensive geographic base from which to serve its clients. Bradley's energy team, with over 50 members across disciplines, is comprised of seasoned transactional, environmental, regulatory and trial lawyers with deep knowledge across the energy industry, with particular strength in renewables and power. The team stays abreast of dynamic and complex market regulations and incentives and regularly advises clients throughout every phase of renewable project finance, development, construction and operation. Its experience includes analysis of tax credit eligibility and development of appropriate project finance models and agreements to maximise return on investment for clients.

Authors

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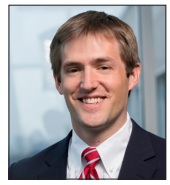

Chris Bowles is co-chair of Bradley's renewable energy team and regularly advises solar developers, owners, operators and EPC contractors regarding all stages of project finance and development, including debt financing and tax equity. Chris is active in real estate acquisitions, due diligence, permitting and zoning compliance for solar developers and advises clients on project documents, including power purchase agreements, interconnection agreements and EPC contracts, state and federal regulatory matters, and tax incentives. His work on utility and commercial-scale solar energy projects includes some of the largest developments in the eastern United States.

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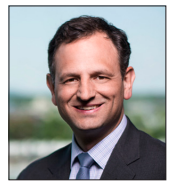
Monica Wilson Dozier is co-chair of Bradley's renewable energy team and represents developers, engineers and contractors in utility-scale, commercial, industrial and residential renewable energy projects, focusing on risk mitigation and dispute avoidance throughout the development, construction, operation and maintenance phases of projects. Monica has significant experience in procurement negotiation and risk management, guiding clients through rapidly changing supply chain dynamics and evolving trade compliance issues. Her experience includes drafting and negotiating capital procurement agreements, EPC agreements, O&M agreements, subcontracts and other project documents for facilities around the world.



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Inflation Reduction Act

Perhaps the most significant recent development in the area of alternative energy, the Inflation Reduction Act of 2022 (IRA) offers approximately USD270 billion in tax incentives to help combat climate change. Its provisions have already begun to transform the American manufacturing and clean energy landscape, expanding the economic appetite for emerging technologies, generating renewed development of domestic manufacturing, and providing renewable energy projects with a decade-long investment tax credit (ITC) for investment in qualified facilities. The IRA seeks to accomplish these goals through direct incentives to entities on both the supply and demand sides of the clean energy industry. Specifically, targeted tax credits were established for manufacturers in the clean energy supply chain and for those seeking to deploy clean energy projects, which, in turn, are creating additional demand for the products in that supply chain.

Manufacturing tax credits

The IRA provides for an advanced manufacturing production tax credit (PTC) in Section 45X of the Internal Revenue Code (IRC) as an incentive to domestically manufacture clean energy products and technologies, which has the potential to be an extremely lucrative tax benefit for qualifying manufacturers. This credit is a per-unit credit for eligible products or minerals produced and sold in the United States after 2022, including solar and wind energy components, battery storage components and critical minerals used in those products. The Section 45X credits are available throughout the supply chain. In the solar energy supply chain, for instance, credits are available for producers of solar photovoltaic modules and, separately, module components such as photovoltaic cells, wafers, polysilicon and polymeric backsheets.

The IRA also expands the advanced energy project credit in Section 48(C) of the IRC by providing up to USD10 billion of credits for manufacturers of certain clean energy products, including energy conversion technologies, light, medium or heavy duty electric or fuel cell vehicles, technology components or materials for such vehicles, and associated charging or refuelling infrastructure. Manufacturers may also qualify for the Section 48(C) credit by re-equipping, expanding, or establishing an industrial facility for the processing, refining or recycling of critical materials and components due to the changing requirements of material sourcing for electric vehicles.

For some manufacturers, these credits will amount to hundreds of millions of dollars annually. The cap on allocations of the advanced energy project credit and the expiration of the manufacturing PTC in 2032 (following a ramp-down period starting in 2029) has created a tremendous rush to market for eligible products in the US manufacturing sector. Since the IRA was passed, battery manufacturing plants have been announced in what media is dubbing the “Battery Belt” in Michigan, Indiana and Ohio, down through Kentucky, and across Tennessee, Georgia and the Carolinas.

Energy tax credits

On the demand side, the IRA restores the 30% federal ITC and expands the 1.5 cents/kWh PTC for renewable energy facilities, and expressly extends the ITC to include energy storage, microgrid controllers and certain interconnection facilities’ construction costs. These credits, found in Sections 45 and 48 of the IRC, are contingent upon satisfaction of prevailing wage and apprenticeship requirements (unless the project began construction prior to January 29, 2023, or is smaller than 1MWac).

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In addition to the 30% ITC, certain qualified facilities may be eligible for additional 10% ITC "bonuses" if they (a) meet domestic content requirements, (b) are located in an "energy community," or (c) for projects less than 5MWac, are serving low-income residences or are located on Native American land.

Direct pay

The IRA provides certain tax-exempt entities, state and local governments, the Tennessee Valley Authority, Indian tribal governments, Alaska Native Corporations, and rural electric co-operatives with the option to elect direct payment of tax credits established by the IRA. Guidance from the US Department of Treasury (Treasury) and the Internal Revenue Service (IRS) issued on 14 June 2023, clarified that subdivisions and instrumentalities or agencies of state and local governments are eligible for direct pay.

Transferability

For taxpayers not eligible for direct payment, the IRA provides the option of transferring all or portions of various tax credits to third parties in exchange for cash payments. This option has the potential to simplify what are often extremely complex tax equity financing structures, but it will result in severing the depreciation tax benefits received in connection with projects from the benefits of the tax credits, potentially making the transferability option less desirable for developers and tax equity investors. Treasury and IRS released proposed regulations on 14 June 2023, which, among other things, clarify that tax-exempt entities eligible for the direct payment option are not able to receive direct payment for credits purchased through the transferability option. They also clarify that the tax credits from a given project can be apportioned and sold to multiple buyers in the same tax year.

Prevailing wage and apprenticeship

On 30 November 2022, Treasury and IRS released guidance on the prevailing wage and apprenticeship requirements in the IRA. Although this guidance failed to provide certainty regarding documentation and administration of the requirements, it did provide an avenue for taxpayers to seek prevailing wage determinations from the US Department of Labor for qualified facilities. Consistent with the policy goals of the IRA, labour unions are well-positioned to take advantage of compliance obligations here, but open-shop contractors and states without significant union labour presence are also quickly moving to establish programmes to comply with these requirements.

Domestic content bonus

Qualified facilities meeting certain domestic content thresholds are eligible to receive an additional 10% ITC or PTC. On 12 May 2023, Treasury and IRS released guidance on the domestic content bonus requirements in the IRA. This guidance confirmed that "manufacturing" is synonymous with "processing" and, for purposes of satisfying domestic content requirements, draws a distinction between mere assembly (insufficient) and true manufacturing (sufficient). The guidance established an Adjusted Percentage Rule formula by dividing direct costs of domestically manufactured products and components by the total manufactured product costs. And, because the guidance requires a component-level analysis of domestic equipment, it prevents taxpayers from qualifying for the domestic content bonus merely by purchasing equipment that is assembled or manufactured in the US using wholly international components. It failed, however, to provide much-needed clarity for administration of domestic procurement. As a result, the industry is actively engaged in comment

submission for the federal rule-making process to come.

Energy communities bonus

Similarly, qualified facilities located in certain areas defined as "energy communities" (ECs) in the IRA are eligible for an additional 10% ITC or PTC. The IRA defines ECs as: (i) brownfield sites; (ii) metropolitan statistical areas (MSAs) and non-MSAs that satisfy the IRA's fossil fuel employment requirement or fossil fuel tax revenue requirement as well as the unemployment requirement; and (iii) a census tract or adjacent census tract with a coal mine closure after 31 December 1999, or coal-fired electric generating unit retirement after 31 December 2009. Determining whether a project qualifies in one of these categories requires a granular, site- and location-specific analysis.

On 4 April 2023, Treasury and IRS released guidance on the EC bonus requirements in the IRA. Treasury and IRS subsequently published, on 15 June 2023, a clarifying notice accompanied by FAQs for ECs. Together, these documents give project developers and other interested stakeholders direction on some of the current ambiguities in qualifying for the 10% PTC and ITC bonuses applicable to ECs.

While the IRA presents unprecedented opportunities for alternative energy and power projects, there is a significant amount of uncertainty around compliance with, and implementation of, its requirements. Following the release of Treasury guidance on each issue described above, the public comment process has begun, as part of what likely will be a lengthy formal rule-making process.

Transmission and Interconnection

The increasing number of domestic alternative energy projects, the electrification of transportation and other energy-producing activities, and the recent boom in mega-energy infrastructure projects such as liquified natural gas (LNG) plants, hydrogen facilities and new oil and gas pipelines all share one thing in common: to operate, they will require more electric transmission lines and interconnection to one of the US's three main power grids – the Eastern Interconnection (which operates in states east of the Rocky Mountains), the Western Interconnection (which covers states from the Pacific Ocean to the Rocky Mountain states) and the Texas Interconnection (which covers most of Texas).

Historically, however, the permitting process for transmission lines has been notoriously slow, with some projects taking more than a decade to get approved, if at all. NIMBY-ism and court challenges have, of course, played a huge part in this, but so too have complex layers of government bureaucracy and other factors. Recognising that this could jeopardise the US's ability to timely achieve its clean energy objectives, recently there has been a greater (and bipartisan) push to streamline the permitting process, including for transmission lines, to speed up the rate at which new energy infrastructure can connect to the grid.

We see this playing out at the federal, state and local levels. For example, the recently enacted Fiscal Responsibility Act of 2023 (FRA) included in Section 321 the "BUILDER (Building United States Infrastructure through Limited Delays and Efficient Reviews) Act", which narrowed and refined the scope of environmental review required under the National Environmental Policy Act (NEPA) in an attempt to streamline the federal permitting process. NEPA reforms in the

FRA include: (i) narrowing the scope of review to only environmental impacts that are "reasonably foreseeable"; (ii) limiting the scope of alternatives analysis to actions that are "technically and economically feasible, and meet the purpose and need of the proposal"; (iii) imposing time limits on environmental impact statements (EIS) (two years from the date an agency determines an EIS is required although extensions are possible); (iv) imposing page limits on EISs and environmental assessments (EAs); and (v) authorising project proponents to prepare EISs and EAs themselves (as opposed to the agency preparing). At the state level, we see some states such as Texas pre-empting local government regulation of transmission projects in favour of review by a single state agency, while other states allow such local regulation, which usually creates increased cost and complexity for permitting transmission facilities.

Of course, efforts to reform and streamline the permitting process are not without opposition by individual landowners, environmental groups and other organisations, and it remains to be seen how much transmission capacity can be added and how soon.

Challenges also abound in the area of interconnection of transmission facilities. Unique technical issues can arise when connecting intermittent (and often remote) power sources, such as wind and solar, to the power grid. Increasingly cumbersome and changing interconnection requirements present novel challenges for developers. The number of energy projects in US interconnection queues is far beyond the available resources, and projects often wait for years in queue for interconnection approval. Without a significant increase in transmission expansion, interconnection challenges are only going to increase, particularly given the additional demand and development driven by the IRA.

Distributed Generation

The market for distributed generation – also called distributed energy resources (DERs) – with its vast potential to support decarbonisation, continues to grow exponentially.

In particular, and in addition to the IRA, the recent Bipartisan Infrastructure Investment and Jobs Act of 2021 provides for investment of up to USD7.5 billion in EV charging, USD10 billion in clean transportation, and USD7 billion in EV battery components, critical minerals and materials. Recent partnerships between Tesla, Ford and General Motors to expand access to Tesla's Supercharger network, and announcements by large hotel chains such as Hilton for installation of EV charging stations further facilitate American adoption of EVs. Innovative energy consulting companies are now offering microgrid solutions by pairing storage, solar and generators for customers who seek to eliminate or significantly reduce their independence on the grid.

There are both technological and regulatory hurdles to continued growth of the distributed generation market. From a technological standpoint, in addition to the evolution of equipment faced by the rest of the industry, utilities managing the transmission and distribution lines to which DERs are connected must develop new mechanisms to safely, reliably and cost-effectively manage the bi-directional flow of power to the grid. This includes managing potential power quality issues and system imbalances. From a regulatory standpoint, laws regarding whether third-party ownership of energy generation equipment is permitted often lack clarity, particularly with regard to DERs. Other state laws and regulations continue to rapidly change in this sector of the

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industry, including net metering, installer licensing and consumer protection laws.

Emerging Technologies

Emerging technologies in the area of alternative energy continue to expand, and the IRA's express expansion of ITC and PTC applicability to new technologies adds further incentive for research and development. Such technologies include hydrogen fuel, sustainable aviation fuel, battery storage, carbon capture, utilisation and storage, methane recapture, and of course, advanced small modular reactors.

The IRA also includes a Methane Emissions Reduction Programme that introduces a charge on methane emitted by oil and gas companies reporting emissions pursuant to the Clean Air Act, and introduces a royalty on all methane gas produced during upstream operations, both of which are spurring new development and deployment of methane recapture technology. Six carbon capture facilities are currently under development, aided by USD2.5 billion in funding from the DOE's Carbon Capture Demonstration Projects Programme.

Battery storage technologies continue to gain market share, particularly when paired with solar PV projects. While the dominant technology remains lithium-ion based, newer iron ore and zinc-based technologies are also now being deployed in the field. Laws and regulations addressing manufacturing, permitting, and recycling of these technologies will continue to evolve as each technology becomes more commonplace.

Critical Infrastructure and Cybersecurity

The energy industry has become increasingly reliant on big data. Utilities and plant operators continually harness an ever-expanding volume of data from a variety of sophisticated meters and plant equipment. While grid modernisation and its associated connectivity provide substantial improvements to grid management capabilities, it also exposes new cybersecurity risks.

The federal government is closely tracking cybersecurity issues with regard to critical infrastructure, as evidenced by increasingly onerous reviews of eligible transactions by the Committee on Foreign Investment in the United States (CFIUS). The North American Electric Reliability Corporation (NERC) and the Federal Energy Regulatory Commission (FERC) play pivotal roles in grid reliability and security. NERC develops and enforces reliability standards, subject to FERC's oversight, aimed at preventing breaches of critical infrastructure. NERC's Critical Infrastructure Protection (CIP) standards are particularly vital in addressing the cybersecurity aspects of the bulk power system, requiring entities to identify and protect critical cyber assets, implement security management controls, report cyber incidents and conduct vulnerability assessments.

With the increase in renewable energy sources and the integration of DERs, there is growing complexity in the management of the grid. While DERs enhance generation diversification, these sources also pose new challenges for grid operators, such as variability, uncertainty and interconnection issues.

Utilities and independent power producers are increasingly aware of and working to mitigate heightened cybersecurity risks, hoping to prevent hackers from disrupting the grid and causing widespread outages. Cybersecurity protocols, tabletop exercises, and insurance policies have become critical tools in this prevention effort.

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Developments in Administrative Law

Renewable energy and power projects are subject to an array of federal and state statutes and regulatory and administrative reviews and approvals administered by agencies at all levels of government. These can include federal permits and assessments under the Clean Water Act (CWA), the Rivers and Harbors Act, NEPA, the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), the Marine Mammal Protection Act, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. Projects implicating federal land and other federal interests can be subject to additional reviews under a wide range of statutory regimes. State and local requirements vary by location, but these can include significant additional environmental reviews, public utility commission proceedings, and local land use and zoning approvals.

Several significant developments and trends at the federal level are altering the governmental review and permitting landscape. These include reforms to the NEPA review process in the FRA discussed above with respect to developments in transmission and grid interconnection. These changes should alleviate many challenges associated with NEPA compliance, although project opponents likely will test these new legal standards in federal court and seek expansive judicial interpretations of agencies' obligations to assess environmental impacts.

Additionally, there are some recent administrative law case law developments.

The US Supreme Court's opinion in Sackett v Environmental Protection Agency, 598 US ___ (2023), will significantly impact project development, likely reducing the need to obtain permits under Section 404 of the Clean Water Act and to conduct ancillary federal reviews triggered by virtue of being under federal jurisdiction – eg, Section 7 review under the ESA and Section 106 review under the NHPA. The Sackett opinion interpreted the definition of "waters of the United States" (WOTUS) set forth in the CWA, narrowing federal agencies' (US Army Corps of Engineers and the EPA) authority to regulate streams, wetlands and other water bodies. Technical aspects of WOTUS will need to be clarified through rule making and guidance, but the likely overall impact will be reduced federal involvement in project permitting.

Finally, federal courts have recently called into question the Chevron doctrine – which has generally required federal courts to defer to an agency's actions and decisions as long as an agency's interpretation of ambiguous authority is reasonable. The seminal case articulating this balance between the courts and federal agencies is Chevron USA v Natural Resources Defense Council, 468 US 837 (1984). The US Supreme Court, however, has narrowed the doctrine over time to give less deference to agency actions and interpretations that do not carry the force of law (eg, agency manuals and policy statements) (known as Skidmore deference). The major questions doctrine also has chipped away at Chevron by limiting an agency where a claim of authority is of vast economic and political significance and Congress has not clearly empowered an agency with respect to the issue (see Utility Air Regulatory Group v EPA, 573 US 302 (2014); see also West Virginia v EPA, 598 US ___, (2022)). Further, Sackett articulated a principle that may curtail agency deference when interpreting ambiguous text, specifically requiring statutory language to be "exceedingly clear" where it "significantly alter[s] the balance between federal and state power and the power of the Government over private property". The

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US Supreme Court recently agreed to hear an appeal in Loper Bright Enterprises v Raimondo in which it could overrule or further limit Chevron deference. Taken together, the trend toward courts giving agencies less deference should generally limit federal agencies' authority, particularly when regulating areas of controversy or economic significance.

Dispute Trends

Disputes continue to evolve in the renewable energy and power industries, particularly as wind and solar facilities enter their second decade in operation and extreme weather events occur with greater frequency. We see the following trends:

Product liability and warranty claims

Renewable energy project operators face novel issues arising out of quickly evolving technology that results in difficult repair or replacement of prior models. This often leads to product liability and warranty claims.

Supply chain and force majeure-related disputes

Supply chain impacts caused by the COVID-19 pandemic or extreme weather events have given rise to more frequent force majeure or other impracticability of performance types of disputes. Further, as novel technologies, particularly in the areas of alternative fuels, DERs and battery storage continue in research and development, deployment in the field can present unique technological hurdles and challenges that significantly impact project timelines and economics and lead to litigation. Procurement-related claims, too, have become common, particularly given the proprietary and non-standard nature of major components of renewables facilities, and the volatile trade environment, as well as raw materials pricing.

Zoning, land use and nuisance claims

Relations with local and community stakeholders also continue to be a driver of disputes in the industry, from restrictive zoning laws and permitting opposition to trespass and nuisance claims. As renewable energy projects have more recently proliferated in regions of the country that have been slower to adopt renewable technology, organised opposition groups have become far more common, and those efforts, in addition to other political considerations, have resulted in state-level policy proposals intended to heavily regulate or otherwise restrict renewable energy development.

One thing is sure. The financial stakes involved in ensuring projects meet effective availability and therefore revenue forecasts remain high, and parties who are unable to effectively mitigate the impacts of downtime and outages are increasingly turning toward dispute resolution to recover losses.

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