

THE PUBLIC-PRIVATE
PARTNERSHIP
LAW REVIEW

THIRD EDITION

Editors

Bruno Werneck and Mário Saadi

THE LAWREVIEWS

THE PUBLIC PRIVATE PARTNERSHIP LAW REVIEW

The Public Private Partnership Law Review

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PREFACE

We are very pleased to present the third edition of *The Public-Private Partnership Law Review*. Notwithstanding the number of articles in various law reviews on topics involving public-private partnerships (PPPs) and private finance initiatives (in areas such as projects and construction, real estate, mergers, transfers of concessionaires' corporate control, special purpose vehicles and government procurement, to name a few), we identified the need for a deeper understanding of the specific issues in this topic in different countries. The first and second editions of this book were the initial effort to fulfil this need.

In 2014, Brazil marked the 10th year of the publication of its first Public-Private Partnership Law (Federal Law No. 11,079/2004). Our experience with this law is still developing, especially in comparison with other countries where discussions on PPP models and the need to attract private investment into large projects dates from the 1980s and 1990s.

This is the case for countries such as the United Kingdom and the United States. PPPs have been used in the United States across a wide range of sectors in various forms for more than 30 years. From 1986 to 2012, approximately 700 PPP projects reached financial closure. The UK is widely known as one of the pioneers of the PPP model; Margaret Thatcher's governments in the 1980s embarked on an extensive privatisation programme of publicly owned utilities, including telecoms, gas, electricity, water and waste, airports and railways. The Private Finance Initiative was launched in the UK in 1992 aiming to boost design-build-finance-operate projects.

In certain developing countries, PPP laws are more recent than the Brazilian PPP law. Argentina was the first country in Latin America to enact a PPP Law (Decree No. 1,299/2000, ratified by Law No. 25,414/2000). The Argentinian PPP Law was designed to promote private investment in public infrastructure projects that could not be afforded exclusively by the state, especially in the areas of health, education, justice, transportation, construction of airport facilities, highways and investments in local security. In Mozambique, Law No. 15/2011 and Decree No. 16/2012 govern the Public-Private Partnerships (PPP) Law and other related PPP regulations, which establish procedures for contracting, implementing and monitoring PPP projects. In Paraguay, a regulation establishing the PPP regime has been enacted (Law No. 5,102) to promote public infrastructure and the expansion and improvement of services provided by the state; this law has been in force since late 2013.

In view of the foregoing, we hope a comparative study covering practical aspects and different perspectives regarding PPP issues will become an important tool for the strengthening of this model worldwide. We are certain this study will bring about a better dissemination of best practices implemented by private professionals and government authorities working on PPP projects around the world.

With respect to Brazil, the experience evidenced abroad may lead to the strengthening of this model in our country. In our last preface, we called your attention to one specific feature of the PPP law in Brazil: state guarantees. This feature permits that the obligation of the public party to pay a concessionaire be guaranteed by, among other mechanisms authorised by law: (1) a pledge of revenues; (2) creation or use of special funds; (3) purchase of a guarantee from insurance companies that are not under public control; (4) guarantees by international organisations or financial institutions not controlled by any government authority; or (5) guarantees by guarantor funds or state-owned companies created especially for that purpose.

The state guarantee pursuant to PPP agreements is an important innovation in administrative agreements in Brazil; it assures payment obligations by the public partner and serves as a guarantee in the event of lawsuits and claims against the government. This tool is one of the main factors distinguishing the legal regimen of PPP agreements from ordinary administrative agreements or concessions – one that is viewed as crucial for the success of PPPs, especially from private investors' standpoint.

Nevertheless, the difficulty in implementing state guarantees on PPP projects has been one of the main issues in the execution of new PPP projects in the country. This point is made worse due to the history of government default in administrative contracts.

In other jurisdictions, however, state guarantees are not a rule. Unlike PPP projects in developing countries, government solvency has not historically been a serious consideration in other jurisdictions. That is the case in countries such as Australia, France, Ireland, Japan, the United Kingdom and the United States.

We expect that the consolidation of PPPs and the strengthening of the government in Brazil may lead to a similar model, enabling private investments in areas where the country lacks the most.

Brazil must adopt cutting-edge models for awarding PPP agreements. The winner is usually chosen based solely on the price criterion (offering of lower prices or highest offers), which sometimes leads to projects lacking advanced or tailor-made solutions. Despite the legal provisions on the role of technical evaluation of offers, they are becoming less relevant. However, some ongoing discussions regarding amendments to the Brazilian procurement legislation and new criteria, which are based on the international experience, could (fortunately) be approved.

In this field, we highlight the current discussions regarding the amendment to the Federal Procurement Law (Federal Law No. 8,666/1993), which is expected to expedite public procurement in Brazil. One of the main innovations proposed in this debate is the competitive dialogue, a type of bid in which the authority engages with bidders to discuss and develop one or more solutions for the tendered project. After the conclusion of the dialogue phase, the authority will establish a term for the submission of bids.

The competitive dialogue is a reality in many jurisdictions (e.g., Australia, Belgium, China, France, Ireland, Japan, and the United Kingdom). In Japan, for example, some projects are procured through the competitive dialogue process. This process may be adopted if a relevant authority is unable to prepare a proper service requirement, in which case it proposes a dialogue with multiple bidders simultaneously to learn more about the specific service it seeks to implement. As another example, in France a dialogue will be conducted with each bidder to define solutions on the basis of the functional programme. At the end of the dialogue period, the procuring authority will invite the candidates to submit a tender based on the considered solutions. After analysis of the tenders, a partnership contract will

be awarded to the bidder with the best price in accordance with the criteria established in the contract notice or in the tender procedure.

We hope the importance of this tool is recognised in Brazil and reflected in our legislation.

In the second edition of this book, our contributors were drawn from the most renowned firms working in the PPP field in their jurisdictions, including Argentina (M&M Bomchil), Australia (Allens), Belgium (Liedekerke), China (Zhong Lun), Denmark (LETT), France (White & Case), India (Seth Dua), Ireland (Maples and Calder), Japan (Mori Hamada & Matsumoto), Mozambique (TPLA), Nigeria (G Elias), Paraguay (Parquet & Asociados), Philippines (SyCip Salazar Hernandez & Gatmaitan), Portugal (Vieira de Almeida), Tanzania (Velma), the United Kingdom (Herbert Smith Freehills) and the United States (Kilpatrick Townsend & Stockton). We would like to thank all of them and our new contributors for their support in producing *The Public-Private Partnership Law Review* and in helping in the collective construction of a broad study on the main aspects of PPP projects.

We strongly believe that PPPs are an important tool for generating investments (and development) in infrastructure projects and creating efficiency not only in infrastructure, but also in the provision of public services, such as education and health, as well as public lighting services and prisons. PPPs are also an important means of combating corruption, which is common in the old and inefficient model of direct state procurement of projects.

We hope you enjoy this third edition of *The Public-Private Partnership Law Review* and we sincerely hope that this book will consolidate a comprehensive international guide to the anatomy of PPPs.

We also look forward to hearing your thoughts on this edition and particularly your comments and suggestions for improving future editions of this work.

Bruno Werneck and Mário Saadi

Mattos Filho, Veiga Filho, Marrey Jr e Quiroga Advogados

São Paulo

March 2017

UNITED STATES

*Robert H Edwards Jr, Randall F Hafer, Mark J Riedy, Christian F Henel,
Daniel P Broderick and Ariel I Oseasohn¹*

I OVERVIEW

2016 saw continued developing interest in public-private partnerships (P3s) at both federal and state levels of funding. At the federal level, the trend toward P3 made more progress along avenues the Obama administration had previously paved in implementing the Transportation Infrastructure Finance and Innovation Act (TIFIA), the Fixing America's Surface Transportation (FAST) Act and the Water Infrastructure Finance and Innovation Act (WIFIA). In addition, the Obama administration oversaw a set of amendments to WIFIA as well as the Water Infrastructure Improvements for the Nation (WIIN) Act. Federal agencies in 2016 made progress establishing and expanding programmes to administer federal funding for critical road and water infrastructure projects. At this time, the federal government's commitment to P3 remains limited to 'horizontal' initiatives involving water systems and highways.

States have been more receptive to innovative P3 applications. Roughly two-thirds of states with P3 enabling legislation leave open the possibility of extending P3s from highway projects to transportation facilities such as airports and 'vertical' projects such as hospitals and schools. As significant vertical projects such as the University of California's 'Merced 2020 Project' and the City of Long Beach, California's Civic Center reach successful completion, we expect to see an increase in the number of single-purpose vertical projects built with shared risk and shared funding. We expect to continue to witness P3 agreements that rely on a combination of private and public funding of capital expenditures (utilising tax-exempt sources such as capital bonds) and long-term operate and maintain concessions. Early indications from the incoming Trump administration suggest that tax credits may become a meaningful incentive to increase private investment in P3 projects.

2016 was less active than anticipated in the P3 clean energy sector, with no identified major P3 projects reaching financial close in 2016. Clean energy P3 projects remain a minority within the US P3 portfolio, while transportation, aviation and healthcare facilities continue to dominate the P3 landscape. We believe that clean energy as well as other high-tech projects will increase their P3 footprint in the US as the financial uncertainties of the election season subside and the underlying technologies mature and de-risk. Nevertheless, as elaborated hereunder, President Trump's rhetoric and executive actions taken thus far suggest that clean

1 Robert H Edwards, Jr and Mark J Riedy are partners and co-head the energy team; Ariel I Oseasohn is a member of energy team; Randall F Hafer is a senior partner and head of the construction and infrastructure team; and Christian F Henel and Daniel P Broderick are members of the construction and infrastructure team at Kilpatrick Townsend & Stockton LLP.

energy projects may enjoy somewhat diminished federal support relative to recent years, which may impede the clean energy P3 presence in the US in 2017.

We anticipate 2017 to usher in the launch of several significant P3 projects. It also will see the early impacts of a new presidential administration that has simultaneously extolled the need for dynamic private investment in public projects while hinting at changes to the legislative and regulatory framework that could significantly alter traditional assumptions regarding the financial incentives, financing structures and divisions of scope and labour that public and private partners typically ascribe to P3s.

The following addresses the 2016 year in review and provides some additional discussion of what 2017 might hold for P3 in the United States.

II THE YEAR IN REVIEW

Below are some of the most notable regulatory and policy changes that took place in 2016, followed by noteworthy P3 projects to reach financial close in 2016.

i Policy, legislative and regulatory update (excluding clean energy projects)

The Obama administration closed 2016 with a series of modest updates to existing P3 laws, regulations and related programmes.

The Department of Transportation established the ‘Build America Bureau’ to administer federal credit programmes issuing credit to P3 participants (and others) under the FAST Act.² The Build America Bureau establishes a Public-Private Partnerships Office, and its web page focuses on P3 and P3 tools and informs the public that ‘The Build America Bureau encourages the consideration of P3 in the development of transportation improvements. Early involvement of the private sector can bring creativity, efficiency, and capital to address complex transportation problems facing State and local governments.’³ The Build America Bureau also now makes available a Credit Programs Guide, Notice of Funding Availability (NOFA) for credit assistance for infrastructure projects, and updated information on TIFIA and FAST projects.⁴ The NOFA has authorised upwards of US\$275 billion per year through to fiscal year 2020.⁵

On 11 March 2016, the Department of Transportation issued a NOFA for critical infrastructure projects pursuant to the FAST Act.⁶ On 22 December 2016, the Build America Bureau announced a new infrastructure financing tool for up to four Seattle area transit projects.⁷

On 16 December 2016, President Obama signed the WIIN Act with strong bipartisan support.⁸ The Act authorises nearly US\$10 billion in federal investment in a host of water

2 www.transportation.gov/buildamerica.

3 Ibid.

4 www.transportation.gov/buildamerica/programs-services/tifia.

5 Ibid.

6 81 Fed. Reg. 13031 (11 March 2016); see also www.fhwa.dot.gov/fastact/factsheets/tifiafs.cfm.

7 ‘USDOT Launches Innovative Infrastructure Financing Tool to Provide up to Nearly \$2 Billion to Seattle Transit Projects,’ available at www.transportation.gov/briefing-room/usdot-launches-innovative-infrastructure-financing-tool-provide-nearly-2-billion.

8 WIIN Act, S.612, Pub. Law No. 114-322 (16 December 2016); see also www.govtrack.us/congress/votes/114-2016/s163.

initiatives, including water infrastructure and services. The WIIN Act also tasks the White House Office of Science and Technology with promoting the use of P3 to develop a framework for planning and building ocean desalination projects.⁹

On 19 December 2016, the Environmental Protection Agency (EPA) signed its interim rule implementing WIFIA, 'Credit Assistance for Water Infrastructure Projects.'¹⁰ The interim final rule notes the EPA's role in promoting the use of P3 by reducing the cost of private investment with 'limited impact on the municipal bond market'.¹¹ According to the EPA, US\$1 billion in annual WIFIA assistance is expected to account for approximately 3 per cent of the market for water infrastructure bonds.¹²

On 10 January 2017, the EPA went to work issuing credit assistance under WIFIA and the WIIN Act. The EPA announced it will make available approximately US\$1 billion in credit assistance for water infrastructure projects under the WIFIA programme.¹³ Through WIFIA, the loans will be available to partnerships, including P3 participants. The new credit assistance programme is geared towards large infrastructure projects with an investment value of at least US\$20 million. The EPA praised WIFIA for providing it with the authority and funding for up to US\$2 billion in water infrastructure.¹⁴

P3 continues to gain acceptance at the state level. Several state legislatures adopted or expanded P3 in 2016. New to adopt P3 in 2016 were Kentucky,¹⁵ Tennessee (transportation projects),¹⁶ and New Hampshire (transportation projects).¹⁷ Louisiana extended P3 to its Department of Transportation and Development¹⁸ and New Jersey extended P3 to certain hospital projects.¹⁹

According to a survey performed by the National Council for Public-Private Partnerships, as of 7 February 2017, a total of 36 states and the District of Columbia have adopted legislation enabling some form of P3.²⁰ Of those, 11 limit P3 to 'horizontal' projects, such as highways and similar transportation projects. Another two states limit P3 to 'vertical' projects such as hospitals, schools and other social infrastructure. Twenty-four states and the District of Columbia are fully open to P3 business.

State laws vary in terms of how they enable, or, alternatively, how they restrict, P3. For example, Kentucky H.B. 309 establishes a Local Government Public-Private Partnership Board with approval rights over any P3 agreement with a total contractual value exceeding 30 per cent of the general fund revenues received by the local government in the immediately

9 Id. at Section 3801(d).

10 81 Fed. Reg. 91822 (19 December 2016).

11 Id. at 91824.

12 Ibid.

13 EPA.gov News Release, 'EPA Launches New Program With \$1 Billion in Loans Available for Water Infrastructure Projects,' available at: www.epa.gov/newsreleases/epa-launches-new-program-1-billion-loans-available-water-infrastructure-projects.

14 Ibid.

15 Kentucky H.B. 309 (8 April 2016).

16 Tennessee S.B. 2093 (27 April 2016) (effective 1 October 2016).

17 New Hampshire, S.B. 549 (16 June 2016) (effective 15 August 2016).

18 Louisiana Act 519 (13 June 2016). Louisiana extended pre-existing P3 from its Transportation Authority to its Department of Transportation and Development. www.ncppp.org/new-laws-pave-the-way-for-transportation-p3s/.

19 New Jersey S.B. 2361 (27 September 2016).

20 www.ncppp.org/resources/research-information/state-legislation/.

preceding fiscal year.²¹ In another example, New Hampshire S.B. 549 restricts P3 to design–build–finance–operate–maintain (DBFOM) and design–build–operate–maintain (DBOM). Additionally, states have passed legislation authorising venture-specific P3, such as California’s S.B. 562 targeting a DBFOM/lease-leaseback arrangement for the City of Long Beach California’s Civic Center project.²²

ii Policy, legislative and regulatory update – clean energy

In his last year in office, former President Obama and his administration continued to support the clean energy sector, as they did in 2015. New regulations were set in place focused on cleaner operating standards for the fossil fuel sector as well as strengthening financial opportunities for the renewable energy market.

Notable among such regulations are the (first-ever) Standards to Cut Methane Emissions from the Oil and Gas Sector issued by the EPA in May 2016.²³ For new, modified or reconstructed sources of pollution, the EPA is finalising a set of standards that will reduce methane, volatile organic compounds and toxic air emissions in the oil and natural gas industry. For existing resources, the EPA issued for public comment an Information Collection Request that requires companies to provide information that will be necessary for the EPA to reduce methane emissions from existing oil and gas sources.²⁴

New fuel-economy standards for medium-duty as well as large trucks, buses and other heavy-duty vehicles were finalised by the Obama administration in August 2016.²⁵ Although such vehicles represent approximately 5 per cent of total volume of traffic, they account for over 20 per cent of transportation-related fuel consumption and greenhouse gas emissions, making these standards highly impactful.

In December 2016, the administration issued an executive order banning oil drilling in large areas of the Atlantic and Arctic oceans.²⁶ This step followed a number of cancellations by the Department of the Interior of federal land lease contracts in Montana and Colorado with oil and gas entities.²⁷ The administration also placed halts on new mining claims on 30,000 acres near Yellowstone National Park.²⁸

On the energy procurement front, the Obama administration in October 2016 set a new goal for civilian agencies in the federal government to procure and facilitate development

21 Kentucky H.B. 309 (8 April 2016) at Section 5(12)(a).

22 California S.B. 562 (11 August 2015).

23 EPA.gov News Release, EPA Releases First-Ever Standards to Cut Methane Emissions from the Oil and Gas Sector, available at www.epa.gov/newsreleases/epa-releases-first-ever-standards-cut-methane-emissions-oil-and-gas-sector.

24 See EPA, Final Information Collection Request (ICR) for the Oil and Natural Gas Industry (10 November 2016), available at www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/oil-and-gas-industry-information-requests.

25 For links to the standards, see EPA News Release, EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Heavy-Duty Trucks (16 August 2016), available at www.epa.gov/newsreleases/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks-0.

26 Exec. Order No. 13,754, 81 Fed. Reg. 89,669 (9 December 2016).

27 www.doi.gov/pressreleases/secretary-jewell-senator-tester-blackfeet-nation-and-devon-energy-announce.

28 See Dep’t of Int. Press Release, Obama Administration Protects 30,000 Acres from New Mining Claims near Yellowstone Park (11 November 2016), available at www.doi.gov/pressreleases/obama-administration-protects-30000-acres-new-mining-claims-near-yellowstone-national.

of 1 gigawatt of new renewable electricity by 2021.²⁹ This target builds on executive action taken by President Obama in 2015 according to which 30 per cent of electricity used by the federal government will come from renewable sources by 2025.³⁰

iii P3 projects reaching financial close in 2016

In November 2016, the Vista Ridge project reached financial close.³¹ This San Antonio, Texas project is the largest P3 water project to reach close to date in the United States. The project includes a 142-mile water pipeline infrastructure that will result in a 20 per cent increase to San Antonio's water capacity by 2020. The Vista Ridge project will supply enough water for 162,000 families and will help to protect endangered species in the Edwards Aquifer during droughts. Sumitomo Mitsui Banking Corporation arranged and led the project financing in the form of US\$875 million in a non-recourse loan.

The Port Authority of New York and New Jersey announced closing on the financing arrangements for the US\$4 billion renovation of the LaGuardia Airport. The project is the largest airport financing and greenfield P3 project in the United States to date. LaGuardia Gateway Partners (Vantage Airport Group, Skanska and Meridiam) entered into a 34-year lease, which includes responsibilities for the team to provide, design, build, operate and maintain services.³² The financing includes US\$2 billion in long-term fixed rate special facility bonds, including a US\$2.35 billion tax-exempt tranche and US\$150 million in taxable municipal bonds.

On 16 December 2016, Natixis Infrastructures announced financial close of the construction of a cross-continental subsea and terrestrial fibre optic cable network connecting northern and western territories in Alaska.³³ The project involves a partnership between Alaska-based telecom operator Quintillion Subsea Holdings LLC and French telecom conglomerate Alcatel Lucent Submarine Networks utilising a US\$1.4 million grant from the US Department of Agriculture's Community-Oriented Connectivity Broadband Grant Program.³⁴ Phase I of the project is expected to be completed in 2017.

III POLICY AND FINANCIAL CLOSING OUTLOOK

i P3-related policy priorities for 2017

Although the United States has historically been slow to embrace P3 as commonplace project financing and execution vehicles, recent changes in the US political climate suggest that the tide may be rising. The recently elected Trump administration campaigned, in part, on the theme that private industry can solve problems at a faster and more efficient rate

29 See Dan Utech & Christine Harada, Continuing the Administration's Commitment to Deploying Clean Energy on Federal Facilities (14 October 2016), <https://obamawhitehouse.archives.gov/blog/2016/10/14/continuing-administrations-commitment-deploying-clean-energy-federal-facilities>.

30 Exec. Order No. 13,693, 80 Fed. Reg. 15,871 (26 March 2015).

31 Garney Reaches Financial Close on Vista Ridge Water Supply Project, www.garney.com/garney-reaches-financial-close-vista-ridge-water-supply-project/.

32 LaGuardia Airport Reaches Financial Close, www.ncppp.org/laguardia-airport-reaches-financial-close/.

33 <http://qexpressnet.com/system/>.

34 'Quintillion partners with Alcatel-Lucent for Arctic fiber', *Alaska Journal*, 6 August 2015, available at www.alaskajournal.com/business-and-finance/2015-08-06/quintillion-partners-alcatel-lucent-arctic-fiber#. WJqIFE1lipo.

than government. Specifically with respect to P3, the Trump administration cited the US's 'crumbling' infrastructure as a 'golden opportunity for accelerated economic growth and more rapid productivity gains', through a 'deficit-neutral' plan.³⁵ Key characteristics in the President's plan from a P3 perspective include:

- a providing maximum flexibility to the states;
- b leveraging new revenues and work with financing authorities, P3, and other prudent funding opportunities;
- c harnessing market forces to help attract new private infrastructure investments through a deficit-neutral system of infrastructure tax credits;
- d linking increased investments with positive reforms to infrastructure programmes that reduce waste and cut costs; and
- e completing projects faster and at lower cost through significant regulatory reform and ending needless red tape.³⁶

It remains unclear at this point what specific administration programme, legislation or regulatory framework will emerge to accomplish these goals. However, both parties in Congress have cited the need to fix America's ailing critical infrastructure and proposed programmes valued at upwards of US\$1 trillion.³⁷ The primary difference between the trillion-dollar plan floated by Democrats in Congress and the administration's plan comes down to financing: Democrats would fund infrastructure using federal dollars exclusively, while the administration's approach is acutely focused on private investment and contribution, such as P3.³⁸

To move forward with such a plan, the federal government will need to meaningfully reform its current approach to infrastructure financing and spending. The administration intends to implement tax reform, including an across-the-board corporate income tax reduction to reduce offshoring and new tax credits under the theory that it would allow developers to pour private funding into new infrastructure.³⁹ These tax credits, sometimes referred to as the 'Navarro-Ross' credits,⁴⁰ are designed to serve as an 'equity cushion' that will

35 'Donald J. Trump's Vision', Donald J. Trump for President, Inc., campaign website, available at www.donaldjtrump.com/policies/an-americas-infrastructure-first-plan.

36 Ibid.

37 'Senate Democrats unveil a Trump-size' infrastructure plan', *The Washington Post*, 24 January 2017, available at www.washingtonpost.com/politics/democrats-set-to-unveil-a-trump-style-infrastructure-plan/2017/01/23/332be2dc-e1b3-11e6-a547-5fb9411d332c_story.html?utm_term=.f8d4a457eab7.

38 Ibid. The Democrat-proposed 'Blueprint to Rebuild America's Infrastructure' would rely on direct taxpayer funding as administered through existing infrastructure stimulus programmes such as the TIFIA, the FAST Act and the WIFIA. 'A Blueprint to Rebuild America's Infrastructure,' Democratic Policy & Communications Center, available at www.dpcc.senate.gov/?q=blueprint&p=search&site=dpcc&num=10&filter=0&x=0&y=0.

39 'Trump's Tax, Infrastructure Plans Jeopardize Exemption for Munis', *The Bond Buyer*, 7 February 2017, available at www.bondbuyer.com/news/washington-infrastructure/trumps-tax-infrastructure-plans-jeopardize-exemption-for-munis-1117786-1.html.

40 The Navarro-Ross tax credits are named after Trump administration senior policy advisers Peter Navarro, Professor of Economics and Public Policy, University of California Irvine Paul Merage School of Business, and Wilbur Ross, international private equity investor. They outline their complete plan in a 27 October 2016 White Paper: 'Trump Versus Clinton On Infrastructure', available at www.donaldjtrump.com/press-releases/white-paper-on-djt-econ-plan.

allow investors to infuse more capital into projects, even risky ones.⁴¹ The credits are designed to become refunded incrementally as developers and contractors pay tax on recognised profits and labour wages, making the approach revenue-neutral.⁴²

Despite its promise for generating interest and infusing capital, it remains unclear how the administration intends for federal, state, or local governments to participate in the resulting public infrastructure projects. The administration's plan does not call for abolishing tax-exempt bonds as P3 financing tools, but the authors of the Navarro-Ross plan suggest that tax credits should replace bonds, which they decry as inefficient and unreliable.⁴³ These kinds of claims have caused some in the bond industry to question the future of tax-exempt bonds in P3.⁴⁴ Further, the administration has not yet indicated what impacts, if any, tax credits in lieu of tax-exempt bonds may affect the willingness or feasibility of government actors to enter into the types of long-term financial incentives, such as concession contracts, that have long served as a catalyst for private investment. Adding to the debate is whether tax credits will adequately incentivise private investment and whether the plan will actually be deficit-neutral.

In addition, while the new tax credits and other initiatives continue to emerge in the context of 'horizontal' P3 projects – infrastructure, rail, water and energy – the administration has also given little indication of what plan it has, if any, for 'vertical' P3 – social innovations such as hospitals and schools. The US has hesitated to use P3 for these types of projects; of the 37 states whose legislation authorises P3, 11 limit the vehicle exclusively to horizontal P3 projects.⁴⁵

Finally, and parallel to infrastructure and tax reform, the new administration has issued an executive order aimed at eliminating new regulations and reducing existing regulations promulgated by the federal government.⁴⁶ Specifically, the order requires that any agency proposing a new regulation for public comment must identify at least two existing regulations for repeal.⁴⁷ The order further requires the agency proposing a new regulation to offset the cost associated with the new regulation by eliminating costs associated with at least two prior regulations.⁴⁸ The impacts of this executive order on P3 are unclear at best.

ii Clean energy P3-related policy priorities for 2017

At this point in 2017, it is too early to make confident predictions on the new administration's clean energy policies. However, based on the presidential campaign rhetoric, actions already taken by the Trump administration and publicly announced plans for the forthcoming year,

41 Id. at 4.

42 Ibid.

43 Id. at 6.

44 'Trump's Tax, Infrastructure Plans Jeopardize Exemption for Munis', *The Bond Buyer*, 7 February 2017, available at www.bondbuyer.com/news/washington-infrastructure/trumps-tax-infrastructure-plans-jeopardize-exemption-for-munis-1117786-1.html.

45 Infographic, 'State Legislation', The National Council for Public-Private Partnerships, www.ncppp.org/resources/research-information/state-legislation/. For example, Maine Revised Statutes, Title 23, Section 4521 limits the definition of 'project' to 'the initial capital development of a transportation facility'.

46 Executive Order on Reducing Regulation and Controlling Regulatory Costs, 30 January 2017, available at www.whitehouse.gov/the-press-office/2017/01/30/presidential-executive-order-reducing-regulation-and-controlling.

47 Id., Section 2(a).

48 Id., Section 2(c).

it seems safe to assume that the clean and renewable energy industries will not enjoy the same level of federal backing enjoyed during the past eight years.

It is expected that the Trump administration will focus on dismantling a number of clean energy-related regulatory and policy policies and actions taken by the Obama administration.

Most notable among such policies is the former administration's signature climate change policy – the Clean Power Plan (CPP) rule. As detailed in last year's edition of this publication,⁴⁹ this rule, administered by the EPA, is a federal programme for the regulation of greenhouse gas emissions from existing power plants. The CPP has been under legal challenges since its promulgation and its enforcement was stayed by the Supreme Court in 9 February 2016, pending consummation of the judicial review. President Trump has vowed to repeal the CPP, but has not yet formally explained how this will be done. Declining to defend the CPP in court or ordering the EPA to craft a substitute rule are possible steps the administration may take. Nominating a Supreme Court justice averse to broad regulatory outreach may be yet one more course of action for the incumbent President. The President has further signalled his intent to undermine the CPP by appointing Scott Pruitt as head of the EPA. Mr Pruitt, a former attorney general for the state of Oklahoma, led the legal challenges against the CPP prior to his appointment and is expected to steer the EPA's policies accordingly.

Another major policy change concerns the United States' commitments under the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change, also known as the Paris Agreement.⁵⁰ 188 nations have joined hands in pledging to reduce greenhouse gas emissions, each pursuant to a nation-specific action plan. The action plan adopted by the United States calls for a reduction of 26–28 per cent on 2005 levels of greenhouse gas emissions by 2025. No formal announcement or steps have been taken by the current administration to date, but according to the head of President Trump's EPA transition team, the United States will 'pull out of the Paris Agreement'.⁵¹

The Trump administration has also voiced its intention to repeal former President Obama's Climate Action Plan⁵² – a national plan issued in 2013 outlining principal ways to cut carbon pollution, prepare the United States for climate change impacts and garner international support for global initiatives to combat anthropogenic climate change and its impacts.

In addition to repealing regulations, parts of the Trump First 100 Day Plan as well as statements made since taking office, including his inaugural speech, suggest that the current administration intends on taking affirmative regulatory steps to spur investments in infrastructure by utilising, among other means, P3 arrangements.⁵³

On 22 October 2016, during an address in Gettysburg, Pennsylvania, then-Presidential nominee Trump announced that if he were elected he would work with Congress to introduce

49 Robert H Edwards Jr, Randall F Hafer, Mark J Riedy, Benjamin P Deninger and Ariel I Oseasohn, Chapter 21 – United States in *The Public-Private Partnership Law Review*, p. 255 (Bruno Werneck & Mario Saadi eds., 2016).

50 Paris Agreement, 12 December 2015, available at http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf.

51 Nina Chestney, US will change course on climate policy, says former EPA transition head, REUTERS (30 January 2017), available at www.reuters.com/article/us-usa-trump-epa-idUSKBN15E1MM.

52 See An America First Energy Plan, www.whitehouse.gov/america-first-energy.

53 See footnotes 34–36, *supra*.

the American Energy & Infrastructure Act, to '[l]everage public-private partnerships, and private investments through tax incentives, to spur \$1 trillion in infrastructure investment over 10 years.'

On 24 January 2017 President Trump went beyond statements, issuing an executive order titled 'Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects'. The order made specific reference to the 'US electric grid' among infrastructure deemed 'high priority'.⁵⁴ Although not the focal point, clean energy infrastructure and projects will ineluctably benefit from grid modernisation.

In April 2016, with large bipartisan support, the first comprehensive energy legislation was approved by the US Senate. The bill, titled 'Energy Policy Modernization Act of 2016', is designed to modernise the electric grid, catalyse investments in renewable energy and usher new clean energy jobs.⁵⁵ Building on Trump's surprise win and the larger Republican majority in both chambers of Congress, Republican lawmakers have expressed change in their previous support, in an effort to reshape the bill to better embody their agenda. It remains to be seen what role the Trump administration will play with respect to this bill in 2017.

It also remains unclear whether the current administration will keep in place certain federal regulations that have had a significant impact on spurring clean energy growth in the United States in recent years, such as federal grants, direct loans and loan guarantees issued by a host of governmental agencies such as the Department of Energy, Department of Agriculture, Small Business Administration and the EPA. Given the by-and-large successful record of these programmes, it seems unlikely that the President will materially undercut their budget or scope.

iii P3 anticipated to reach financial close in 2017 (excluding clean energy projects)

Transform 66, a US\$2.5 billion multi-modal expansion of interstate 66 outside the beltway surrounding Washington, DC in northern Virginia, is set to reach financial close in July 2017.⁵⁶ In December 2016, the Commonwealth signed an agreement with Express Mobility Partners, a private sector consortium, to finance, design, build, maintain and operate the project under Virginia's Public-Private Transportation Act.⁵⁷ The project is expected to result in US\$2.5 billion in construction, US\$800 million in net present value for transit capital and operating improvements over the term, US\$350 million in net present value for other corridor improvements over the term, and US\$500 million for other corridor improvements at financial close next year.⁵⁸

Phase I construction is under way on the University of California at Merced's 'Merced 2020 Project'.⁵⁹ The 1.2 million gross-square-foot expansion has a design and construction budget of US\$1.3 billion composed of roughly US\$600 million in UC external funding,

54 Executive Order Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects, 24 January 2017, available at www.whitehouse.gov/the-press-office/2017/01/24/executive-order-expediting-environmental-reviews-and-approvals-high.

55 S. 2012, 104th Cong. (2016), available at www.congress.gov/congressional-report/114th-congress/senate-report/138/1.

56 Transform 66, available at www.p3virginia.org/projects/interstate-66-corridor-improvements/.

57 News Release, 'Governor McAuliffe Announces Selection of Private Sector Team to Finance and Deliver I-66 Outside the Beltway Project in Northern Virginia', available at: http://outside.transform66.org/news_information/default.asp.

58 <http://outside.transform66.org/procurement/default.asp>.

59 <http://merced2020.ucmerced.edu/>.

US\$590.35 million in developer investment and US\$148.13 million in campus funds.⁶⁰ The P3 structure utilises an ‘availability payment concession’ model wherein the private developer initially finances construction up until the building is ready for use, receiving progress payments during the construction period. Once the building is ready for use, the public owner begins making payments to cover remaining capital costs, operations and maintenance costs for the balance of the agreement’s 39-year life cycle.⁶¹

A further initiative to watch in 2017 is the proposed ‘Measure M’ transportation upgrades by the Los Angeles County Metropolitan Transportation Authority (LA Metro). LA Metro has received a series of unsolicited P3 proposals to address needs identified by LA county voters in a November 2016 ballot initiative.⁶²

iv Clean energy P3 anticipated to reach financial close in 2017

Connecticut State Colleges & Universities issued a request for proposals to finance, design, install, operate and maintain solar photovoltaic (PV) systems on building roofs and/or ground mount locations at Southern Connecticut State University (SCSU), and sell the electricity output to SCSU. The power purchase agreement will be for 20 years. Any awards arising from this request for proposal (RFP) may also be extended to other constituent units of higher education, for the installation of similarly sized PV systems at other campus locations at the rates proposed, if mutually agreed upon by both parties.⁶³

The Chicago Infrastructure Trust initiated the Smart Lighting Project to modernise the quality and reliability of Chicago’s outdoor lighting. In addition to a large-scale conversion of the city’s existing sodium lighting to light emitting diode (LED) technology, the project will include a lighting management system and targeted repair and/or replacement of poles and wiring to enhance system reliability. The RFP was issued in April 2016, with the latest submission deadline being December 2016. Selecting a winner and financial close are expected in 2017.⁶⁴

A project to create a modern streetlight system was launched in the District of Columbia on 24 January 2016, with an industry forum that attracted hundreds of potential bidders. The event marks the first significant step in a procurement by the Office of Public-Private Partnerships. The project is a joint effort with the District Department of Transportation and the Office of the Chief Technology Officer to convert the district’s streetlights to more reliable and sustainable LED technology, deploy smart city technology such as free broadband WiFi and remote monitoring of the lights, and to transfer the system maintenance to a new private sector partner through a performance-based contract for greater accountability. If progressed

60 Ibid.

61 Ibid.

62 ‘Metro receives Unsolicited Proposal that could accelerate several Measure M projects; four additional mega project proposals under review,’ in *The Source*, 11 October 2016, available at <http://thesource.metro.net/2016/10/11/metro-receives-unsolicited-proposal-that-could-accelerate-several-measure-m-projects-four-additional-mega-project-proposals-under-review/>. For additional information on Measure M, visit <http://theplan.metro.net/>.

63 Bd. Of Regents for Higher Educ., Conn. State Colls. & Univs., Request for Proposals RFP BOR-1605 (4 April 2016), available at www.ct.edu/files/rfp/SCSU_Solar_Photovoltaic_RFP.pdf.

64 Chicago Infrastructure Tr., Mayor Emanuel Announces New Street Lights; Requests Public Feedback Before Installation (13 December 2016), available at <http://chicagoinfrastructure.org/press/>.

swiftly, winner selection and financial close could take place in 2017 or the first half of 2018.⁶⁵

Massachusetts, Connecticut and Rhode Island completed the selection of winners in six request for proposal processes for the procurement of renewable energy projects. The winning projects include onshore wind projects totalling approximately 150MW and solar plants totalling approximately 300MW. The foregoing states are requiring local distribution utilities to sign power purchase agreements (PPAs) with the winners and have them submitted for approval by March 2017. Financial close of some of these projects is expected concurrently or shortly after PPA executions.⁶⁶

IV BIDDING AND AWARD PROCEDURE

i Expressions of interest

While each state has specific procedures for P3 bidding, the Federal Highway Administration (FHWA) has created a 'P3 toolkit' containing exemplary procedures and recommendations for public entities modelled around highway projects. While not binding on any state, the FHWA recommends that the public partner solicit bids by using: 'a multi-stage "best value" procurement process. This approach initially includes a public request for qualifications, followed by a selection of qualified bidders and the issuance of a request for proposals.' Thereafter, the public entity selects a bid and negotiates with the private entity with the winning bid.

ii Requests for proposals and unsolicited proposals

A common approach for a public entity seeking a private sector partner for a P3 is 'the 'two-step request for qualification' and 'request for proposals' to obtain a qualified pool of candidates'. Many public entities also conduct interviews with potential private partners. Some public entities even receive unsolicited bids for P3s depending on applicable regulations. For instance, Miami-Dade County allows potential private partners to submit unsolicited proposals containing specified information, as well as a fee, to contract for public works over US\$15 million. The county has a specified period of time to consider such proposals and, if selected, issues a competitive solicitation asking for proposals for the same project.

iii Evaluation and grant

Regardless of solicitation methodology, selection of a preferred bid also can occur based on criteria 'such as the lowest net present value of gross revenues required, the shortest proposed length of the concession term, the lowest subsidy or availability payment required, or the dollar value of the offer'. Evaluation and selection of P3 bids are typically governed by procedures that achieve transparency in procurement due to the public nature of the public partner. For instance, some states require an independent review panel comprised of members from stakeholder groups to review P3 project proposals. The financial stability of all partners

65 Off. Of Pub.-Private P'ships, Gov't of D.C., District launches Smart Lighting Project, available at https://op3.dc.gov/sites/default/files/dc/sites/op3/release_content/attachments/2017.01.24%20Smart%20Lighting%20Industry%20Forum%20Press%20Release%20FINAL.pdf.

66 See, e.g., Mass. Clean Energy website, 83D Documents, available at <https://macleanenergy.com/83d/child-page/>.

is also of great importance and ‘complete due diligence [confirming] the potential private partner’s resources and its financial viability’ is common. Most states also require contractors to maintain various levels of insurance or bonds for P3s.

V THE CONTRACT

i Payment

A variety of payment models have been implemented in US transportation P3s including: (1) ‘toll concessions’ whereby the private partner takes on a project in exchange for receiving tolls (the public party usually limits the rate of toll increase in some manner); (2) ‘shadow toll concessions’ whereby the private partner receives payment for each vehicle that uses the facility (sometimes payment is adjusted based on safety, congestion, or pre-established floors and ceilings); and (3) ‘availability payments’ whereby the private partner receives payment based on the availability of the facility at a specified performance level.

Two of the most important payment mechanisms are revenue-based payments and availability payments. Under revenue-based payments P3 contracts, the private entity recoups its development and construction costs from user fees generated by the asset. For example, if the asset is a road, the user fee would be the toll charged for usage. The P3 agreement typically details the structure of the toll and the extent to which the private entity can modify the toll. The contract often limits the profit of the private entity by establishing a cost-sharing structure with the government when a certain threshold is reached. On the other hand, if toll revenues are below a certain threshold, the government may be contractually required to cover the difference.

Owing to the private sector’s limited appetite to take on this market risk, availability payments have become increasingly popular. Availability payments are a means of compensating a private concessionaire for its responsibility to variously design, construct, operate and maintain a tolled or non-tolled roadway for a set period. They are made by a public project sponsor based on project milestones such as facility completion or facility performance standards such as lane closures or snow removal. Availability payments are often used for toll facilities not expected to generate adequate revenues to pay for their own construction and operation, and the public sponsor retains the underlying revenue risk associated with the toll facility.

Because availability payments also carry less overall risk to the private entity than does a full concession, a concessionaire also can rely on the public agency’s credit to secure financing or rather than unpredictable toll revenue. In a typical availability payment model, the government makes periodic payments, often contingent on the achievement of project milestones, to the private contractor over an extended period of time (often 20 to 30 years). Owing to the potential burden of availability payments on the public sector entity, should usage fall below the predicated base case model, certain states may place limits on the scope and size of availability payments.

ii State guarantees

In general, US states do not offer state guarantees. Unlike P3 projects in developing countries, the solvency of the government has not historically been a serious consideration. In addition, financing for many US P3 projects is obtained through the TIFIA and similarly federally guaranteed funds.

Most state guarantees to the private entity are contractually based. The most common such guarantee is a revenue guarantee. A revenue guarantee assures a certain level of usage or revenue for a project. For example, it may guarantee the revenue generated by a toll road per year. If the actual revenue falls below this amount, the state makes up the difference. In support of the state P3s, the federal government offers various credit enhancements and in some cases guarantees.

iii Distribution of risk

The table below provides a comprehensive summary of the various risk sharing approaches implemented under US P3 arrangements. For each project delivery model, various functional responsibilities are shifted to the private sector. The risk transfer to the private sector increases along a spectrum ranging from the design–build project delivery model to the build–own–operate–transfer model.

	Project delivery models	Functional responsibilities and project risks
	Design–build	Final design, construction and construction inspection
P3	Design–build with warranty	Final design, construction, construction inspection and long-term preservation
	Operate and maintain	Maintenance and operations
	Construction management at risk	Preliminary design, final design, construction and construction inspection
	Design–build–operate–maintain	Finance, final design, construction, construction inspection, maintenance, operations and traffic revenue
	Design–build–finance–operate	Finance, final design, construction, construction inspection, maintenance, operations and traffic revenue
	Brownfield concession	Finance, maintenance, operations, long-term preservation and traffic revenue
	Greenfield concession	Finance, final design, construction, construction inspection, maintenance, operations, long-term preservation and traffic revenue
	Build–transfer–operate	Finance, preliminary design, final design, construction, construction inspection, maintenance, operations, long-term preservation and traffic revenue
	Build–own–operate–transfer	Planning, environmental clearance, land acquisition, finance, preliminary design, final design, construction, construction inspection, maintenance, operations, long-term preservation, traffic revenue and asset ownership
Non-P3	Traditional design–bid–build	Final design and construction
	Build–own–operate	Planning, environmental clearance, land acquisition, finance, preliminary design, final design, construction, construction inspection, maintenance, operations, long term preservation, traffic revenue and asset ownership
	Asset sale	Finance, maintenance, operations, long-term preservation, traffic revenue and asset ownership

iv Adjustment and revision

P3 contracts are carefully calibrated to help balance the ability of the private party to make its return on investment while simultaneously ensuring that the public service is delivered in an efficient and cost-effective manner. Accordingly, P3 contracts frequently contain adjustment of payment levels including floors to help ensure a minimum return for the private sector and ceilings designed to protect the public and avoid excess profits or over compensation to the private party. Further, in many toll P3s, there are sharing mechanisms that may be triggered by revenue or return targets.

P3 contracts frequently contain adjustment provisions for unforeseen circumstances, force majeure, change of law and other events that were beyond the reasonable contemplation

of the contracting authority and the private sector participant. Adjustment provisions also may be included and allow the public entity to request changes to the scope or timing of services or adjustments to the design of the delivered systems. When market conditions change dramatically making the assumptions underlying the original contract unworkable, it is helpful if the P3 contract itself provides mechanisms for the parties to orderly make acceptable contractual amendments.

v Ownership of underlying assets

The public sponsor generally has control of the underlying asset in US P3s:

In a P3, the public agency retains ownership of the asset or enterprise, oversight of the operations and management of the asset, and controls the amount of private involvement. Through a P3, the public sector sets the parameters and expectations for the partnership and the private sector uses access to capital markets to address the public agency's needs. If the P3 does not live up to the contractual expectations of the partnership, the public agency can regain complete control of the asset or enterprise system.

vi Early termination

With respect to early termination, most US P3 contract provisions address the following key issues: termination for public entity default; termination for developer default; termination for extended force majeure events; and termination for convenience by the public entity. P3 contracts must anticipate default, compensation for default and orderly unwinding of the P3 in the event of termination.

VI FINANCE

In the US P3s are frequently financed through a combination of private (debt and equity) and public funds including federal, state and local funds. Under many P3 structures, the public entity requires that the private sector place equity at risk. In the event that the private sector fails to perform on time and or on budget, the entity may lose part or all of its equity investment.

At the centre of a P3 project is a special purpose vehicle formed to undertake the P3. Under many typical P3 arrangements, the equity investments from the investors, along with bonds and/or loans benefiting from various federal and state enhancements are used to fund the initial design, development, procurement and construction of the P3 project. That is, the necessary up-front investments required to enable the project to reach commercial operation.

Historically, there have been varied sources of equity in P3s. A recent survey determined that the sources of equity investments in P3s in the US from 2008–2013 are as follows: contractor–developer 37 per cent, fund manager 32 per cent, operator 19 per cent, and institutional direct investor 12 per cent. The funding from 'lenders' described as bonds and/or loans are usually supported by federal programmes, or benefit from tax-exempt status.

VII OUTLOOK

The market for P3 projects in the US is expanding steadily in both new and traditional fields due to both diverse public infrastructure needs; and constrained public budgets (State and Federal) nationwide. As concisely stated by one commentator:

After decades of underinvestment and an increasing population, today's infrastructure needs are large and continue to grow. Federal, state and local governments are finding it difficult to finance new projects on their own due to decreased tax revenue and shrinking budgets. These two factors have increased the political will and desire to seek alternatives to the traditional 'design-bid-build' procurement methodology. Many states and the federal government agree the P3 model maximizes value for their constituents, delivers a lower total cost, and can be delivered quicker.⁶⁷

Despite the potential of the US P3 market, the extent of its actual growth depends on the following:

- a* political cycles, particularly the implications of gubernatorial elections;
- b* the federal government's continued ability to offer loans and other forms of financial assistance in P3 transactions; and
- c* the extent to which other funding sources (e.g., gas taxes) grow and lessen the catalysts for P3.⁶⁸

While the need for infrastructure development and investment in the United States remains strong – and will likely continue to be for many years – both the trend of expanding uses of the P3 model as well as the adoption of P3 enabling legislation must continue. If public owner's ability to use the P3 model grows along with their confidence in the model's success and private sector cooperation remains strong then the US P3 market will continue to grow. Based on the trends presented and analysed in this chapter it is anticipated that the US P3 market will continue to grow as the potential to do so is large.

67 Dan McNichol, The United States: The World's Largest Emerging P3 Market (30 January 2016, 1:45 PM), www.aig.com/Chartis/internet/US/en/FINAL%20P3%20AIG%20Whitepaper_tcm3171-664767.pdf.

68 Andrew Deye, US Infrastructure Public-Private Partnerships: Ready for Takeoff?, *Kennedy School Review* (27 January 2016, 10:59 AM), <http://harvardkennedyschoolreview.com/us-infrastructure-public-private-partnerships-ready-for-takeoff/>.

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Mark J Riedy is a partner at Kilpatrick Townsend & Stockton LLP in Washington, DC and co-leads its energy, project finance and clean technologies practice team. For more than 37 years, he has focused his practice on complex project development and finance, private placement, M&A, investment fund structuring and related investments, and regulatory and legislative compliance representation in more than 60 countries worldwide for renewable and conventional energy and chemicals, clean energy technology, energy storage, data centre, environmental and infrastructure clients. His clients represent developers, lenders, EPCs, O&Ms, equipment providers, private equity, venture capital and infrastructure funds.

Mr Riedy received his JD from the Georgetown University Law Center and graduated Phi Beta Kappa and *summa cum laude* from the University of Michigan with a BA. He has received numerous awards over his career including Biofuels Digest as a Top 100 World Bioenergy Leader (#42 in 2015–2017, #49 in 2014–2015, #56 in 2013–2014, #50 in 2012–2013 and #67 in 2011–2012), Legal Leaders as one of Washington, DC & Baltimore's Top Rated Lawyers for Business and Commercial Law (2011–2016) and Martindale-Hubbell as an AV Pre-eminent rated attorney (past 20 years). Mr Riedy also is one of the five founders and General Counsel of the American Council On Renewable Energy (2001–present) and is the Vice Chairman of the American Bar Association's Project Finance and Program Committees in the Energy, Environment and Natural Resources Section (2010–present).

CHRISTIAN F HENEL

Kilpatrick Townsend & Stockton LLP

Chris Henel advises and assists government contractors regarding a wide array of issues including front-end compliance questions and reviews, proposal preparation, bid protests, claims, disputes, and appeals. He works with contractors across several industries, including construction, infrastructure, aerospace and defence, healthcare, and information technology. Mr Henel's regulatory compliance experience includes advising government contractors on how to comply with various contractual obligations, federal laws, regulations, policies, and standards that govern their relationship with federal, state and local governments. He counsels clients on ethics, small business issues, socioeconomic regulations, and labour and employment matters as they affect government contractors. Mr Henel's transactional practice includes counselling clients on P3 legislation, regulations, and development opportunities.

DANIEL P BRODERICK

Kilpatrick Townsend & Stockton LLP

Dan Broderick focuses his practice on a variety of construction, suretyship, and government contract matters including cases involving public and private construction disputes. Mr Broderick has experience with bid protests before the US Government Accountability Office, size determination appeals before the US Small Business Administration's Office of Hearing and Appeals, and appeals of contracting officers' final decisions before various administrative boards. He also has significant experience preparing certified claims, requests for equitable adjustments, and termination for convenience settlement proposals. Mr Broderick's transactional experience includes advising clients in the review and negotiation of prime contracts and subcontracts under a diverse range of project delivery models. Prior to joining the firm, Mr Broderick was an associate in the Washington, DC office of a national law firm in its construction practice group.

ARIEL I OSEASOHN

Kilpatrick Townsend & Stockton LLP

Ariel Oseasohn is an energy transactions analyst in the firm's energy, project finance and technology team. His practice focuses on the development and financing of projects in the clean and renewable fields, including solar-thermal, photovoltaics, biofuel, bio-chemicals and natural gas fired facilities.

Prior to joining the firm, Mr Oseasohn worked as an associate for Yigal Arnon & Co in Jerusalem, Israel, where he counselled governmental, regulatory, and private sector actors in the renewable energy and infrastructure spaces. Ariel has extensive experience in advising on all facets of renewable energy projects, from the procurement through the development and financing (including within a public-private-partnership setting) stages thereof. Ariel received his LLB from the Hebrew University of Jerusalem, is an LLM candidate at Georgetown University Law Center and is a member of the Israeli and New York Bar Associations. Ariel is also licensed as a special legal consultant in the District of Columbia.

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