4. Why IBNI is needed to achieve 2050 Net Zero

Key Points

- IBNI will serve as both a *leader* and a *catalyst* on behalf of the global nuclear industry.
- Based on proven multilateral IFI models, IBNI will unlock vast amounts of new and incremental cost-efficient capital available for IBNI-supported nuclear projects and programs.
- IBNI is both a "game changer" and the "missing link" in global nuclear finance.

In Section 3 we have already established the very strong case for *nuclear energy being a significant component of any 2050 net zero pathway.* Here we examine the question as to *the necessity of IBNI in support of the significant required scaling-up of global nuclear capacity which will be required as a major component in achieving 2050 net zero* in the most feasible and fiscally prudent manner possible. Under an optimal scenario, the nations of the world and their financial markets may need to invest up to approximately US $21.5 trillion[57] in additional nuclear capacity over the ensuing 30 years. This will necessarily require "unlocking" and deploying vast quantities of long duration, cost efficient capital from the global capital markets[58] that can be deployed into nuclear energy projects. As is widely recognized, a very large share of the global capital markets is currently not able or willing to participate in the nuclear sector under current circumstances.

While there is currently an ongoing initiative by many in the nuclear industries to broadly 'qualify' nuclear energy sector projects, assets and companies as 'ESG investable' based on the technology's climate mitigation attributes and a broad range of other ESG criteria, in the opinion of the SAG, simply qualifying the nuclear sector as an 'ESG investable asset class' is not likely to result in any significant movement in additional global capital into the nuclear sector without IBNI. There are many other fundamental economic, commercial, policy, reputational and other impeding elements and risks which will likely continue and make it very difficult for many investors to participate in the nuclear sector, with or without favorable

[57] See section 3.1, Figure 22.

[58] Corresponds to the IBNI-IO SAG's optimal (high case) scenario where nuclear generation achieves 60% of total world power generation by 2050. This results in the addition of 5.3TW$_e$ of additional nuclear generation capacities, at an average cost of US $ 4,068 / kW$_e$ (world average) in total average investment costs, in current values (which ignores a key objective of IBNI, which is to cause nuclear overnight costs to progressively decrease over time as the pace of demand for nuclear technology increases, repetitive NOAK installation occur and innovative new nuclear technologies become commercially viable). IBNI-IO SAG has projected that the US $ 21.5 billion 30-year total nuclear capital investment could be reasonably decreased, through progressive cost decreases for nuclear technologies, to approximately US $ 13.8 trillion (ca. US $ 2,600 / kW$_e$ 30-year weighted average total investment costs)

determination or resolution on the 'nuclear ESG question'. Simply stated, without IBNI taking on a leadership and catalytic role in promoting nuclear energy as an profitable and sustainable, sufficiently de-risked, appropriate and ESG compliant investment class, it is highly unlikely that the nuclear nations, the nuclear industry and the global financial markets will each be able to become galvanized behind common objectives, which would enable such a necessary large-scale deployment of capital into the nuclear sector required for nuclear to 'actually make a difference' in achieving 2050 net zero.

IBNI will act as a nuclear specialized 'anchor investor/lender' in projects, setting new rigorous standards and criteria for project structuring, due diligence and compliance. Only this leadership that only IBNI can provide will enable significant global capital markets participation in the nuclear energy sector. IBNI's approach will be persistent and incremental to demonstrate to the world (once again) that large-scale investment in nuclear energy is fundamentally solid investment proposition for many different investors and creditors and their stakeholders.

As mentioned above, IBNI will need to play both the primary *enabling* and *catalytic* role in promoting a new wave of global capital markets participation in the nuclear sector over the next 30 years. Simply stated, IBNI will need to take on the leading and indispensable role in advancing and achieving nuclear's prominent role in realizing 2050 net zero.

The availability of and access to cost-effective financing for nuclear infrastructure is clearly an issue which significantly impacts the ability of nuclear power generation to be scaled-up and compete globally, with other forms of generation on a least cost basis[59]. The issue of access to and the affordability of existing nuclear financing sources varies significantly from country to country, market to market and from situation to situation. Generally, there are currently many major impediments impacting nuclear project development and financing, which are present both in many well-established nuclear markets and also in many newcomer countries seeking to develop their first nuclear plants. IBNI's financing and support programs will be designed to provide solutions whereby nuclear energy programs can rapidly develop and/or expand in all market and economic situations applicable across IBNI's highly diversified membership base, which will range from advanced economy countries with already well-established nuclear generation and domestic nuclear industries to developing countries aspiring to implement new nuclear programs but have no existing nuclear industries. To enable and achieve the targeted overarching goal of a very significant 30 years scaling-up of global nuclear capacities, IBNI will broadly apply the following three key principles:

1. **Qualification.** IBNI financing and other support will be available and provided on a competitive, open/fully transparent, and technology -neutral basis to project sponsors within all IBNI member countries. Nuclear project sponsors within member states will need to apply and compete for IBNI support. Such finite support will always be preferentially offered to only those best-qualified

[59] Nuclear energy projects, like all other proven low-carbon generation technologies (except biomass, generally) are capital-intensive, resulting in high fixed costs relative to variable costs. Therefore, the cost of capital component of nuclear (similar to virtually all other low carbon generation technologies) is a key determinant of the relative cost and affordability of nuclear-derived energy generation.

applicant nuclear programs and projects which most fully adhere to IBNI's pre-established Standards and Criteria (see Section 5). For all hopeful competing recipients of IBNI financing and support, IBNI's Standards & Criteria will compel the project sponsors, together with their governments and institutions to enact market, regulatory and policy frameworks and decisions that allow nuclear generation to be supported and fairly compete in their energy markets, in a long-term sustainable manner. IBNI's support programs and Standards and Criteria will also be purposefully tailored to enable IBNI supported nuclear projects to report well under emerging ESG metrics, which will be an essential driver for the nuclear sector to emerge as an investable 'ESG compliant asset class'.

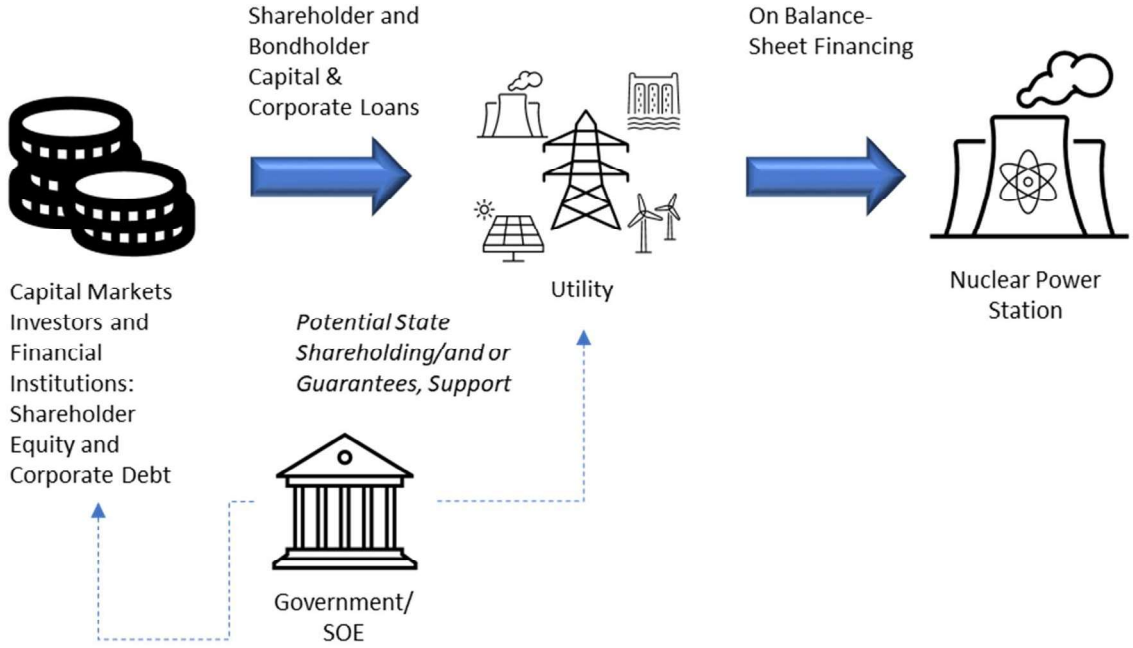
2. **Access.** IBNI financing (and IBNI initiated co-financing) and other support will provide NPP project sponsors and owner/operators in IBNI members states with access to sufficient and cost-effective financing for well-qualified NPP projects that may otherwise not exist (and without necessarily being tied to any particular type or vendor of nuclear technology).
3. **Affordability.** Amongst of IBNI's key goals will be to drive-down and minimize the cost of nuclear power generation relative to all other low carbon generation technologies, drive-up nuclear's share of global generation and thereby minimize overall energy costs to consumers. The low cost of IBNI's direct financing, together with the cost of capital from lenders and investors that participate alongside IBNI are expected to represent amongst the lowest cost of capital in the world available to nuclear project sponsors[60]. Simultaneously, IBNI's programs will drive significant reductions and efficiencies related to the capital and life-cycle costs.

Historical Perspective on the Financing of Nuclear Power Projects and Potential New Structures

From a historical perspective, there have been only two mainstream, very simplistic funding and financing models employed for developing nuclear projects: a) utility financed projects (on-balance sheet financing); and b) government financed projects. While elements of non-recourse project financing have been introduced and incorporated in numerous nuclear financing structures, despite some valid attempts, there has never been a case to date where an NPP has ever been financed on a "pure" project finance basis anywhere in the world. These two historical mainstream nuclear financing models are illustrated in the below diagrams.

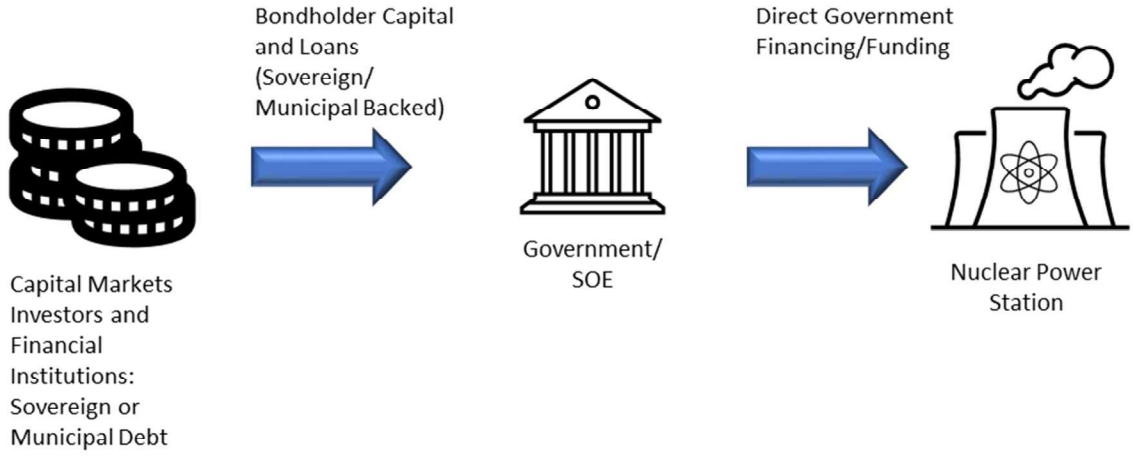
[60] In many cases, IBNI will directly provide a significant component of the financing for a nuclear project. Similar to all other existing multilateral IFIs, it is expected that IBNI will maintain 'AAA' rated senior unsecured credit ratings, which will allow IBNI to attract the lowest possible cost of capital in the global financial markets, and such low underlying costs will be passed along to IBNI participants. In addition, it is anticipated that IBNI's participation and serving as the "lead/anchor" investor in a nuclear financing, will attract other capital markets sources of low-cost, long-term capital, such as commercial lending institutions, infrastructure funds, pension funds, insurance companies, sovereign wealth funds, ESG funds, etc.

FIGURE 27 - ILLUSTRATION OF TYPICAL UTILITY FINANCED NPP



Source: IBNI-IO SAG

FIGURE 28 - ILLUSTRATION OF TYPICAL STATE FINANCED NPP



Source: IBNI-IO SAG

In many major world nuclear markets such North America, Western Europe, Japan and South Korea, nuclear power plants have mainly been financed by large electricity or combined utilities (in some cases investor-owned and in others, government-owned or hybrid – in both USA and Finland, for example, there are also numerous examples of municipal-owned utilities and cooperatives owning, operating and financing NPPs).

Normally, the funding of costs of such utility financed nuclear plants have ultimately been borne by the utility system rate payers (and in some cases and to a more limited extent, taxpayers). Historically, utility financed NPPs have been a outstanding success during the periods of time when electricity markets were regulated in markets such as North America and in Western Europe. In fact, utility financing of NPPs has been the primary model implemented during the periods of unprecedented historical growth of global nuclear generation capacities, which achieved average annual growth rates of approximately 32% from 1960 – 70 and 22% from 1970 – 80[61]. Under regulated energy markets, these (in most cases, vertically integrated and monopolistic) utilities were able to ascertain predictable future revenues from future electricity tariffs, which allowed them to invest significant sums of capital in long-duration assets like NPPs, which were financed mainly through corporate debt and equity raised in the capital markets and from financial institutions (on-balance sheet financing)[62].

Since the 1990s, whereby many of these same electricity markets have become subject to liberalization and in some cases also to unbundling policies, it has become increasingly challenging for utilities in deregulated market environments to invest in nuclear power projects. NPP projects, like almost all other forms of low carbon generation have a high ratio of fixed costs, which generally necessitates a stable and long-term predictable revenue stream related to a plant's available capacities. Deregulated energy markets have introduced a significantly greater degree of short-term wholesale electricity price volatility. In some cases, electricity market price decreases and volatility have also been driven by competing and very low fossil fuels-derived electricity prices and together with subsidized renewable generation technologies (generally, through technology specific subsidy policies), has created a very challenging economic case for nuclear power in these markets. In such deregulated market environments, utilities and other nuclear power producers have generally and rationally come to favor investing in smaller, less capital intensive and flexible generation capacity such as gas generation plants that have often been viewed by utilities as an ideal and cost-optimal means of providing either "base load" or "load following/peak" generation capabilities. This has dynamic (where there is generally insufficient or non-existent carbon pricing) has become self-reinforcing in many markets as increasingly higher VRE penetration levels has necessitated the need for dispatchable back-up and reserve generation to meet residual demand. However, the "game changer" going forward as nations develop their plans to achieve and deliver upon 2050 NDC's will be that continued investment in new fossil fuels generation capacities will no longer be a feasible option under any 2050 net zero framework.

NPP projects have also tended to require very large capital investment volumes and long-duration construction periods[63] and have also been subjected to increasingly complex regulatory regimes. In many

[61] Source: [16]. According to source, world nuclear operational capacities in 1960, 1970 and 1980 were 1,087 MW_e, 17,656 MW_e, and 133,037 MW_e, respectively. Accordingly, these increases accounted for a 32.1% CAGR from 1960 to 1970 and a 22.4% CAGR from 1970 to 1980.

[62] In some cases, such as in the United States, governments have also offered specific loan guarantee programs for nuclear projects which have been designed to increase private investment in nuclear power generation.

[63] Note that emerging new SMR and AR reactor technologies may offer potential lower capital investment volumes and shorter development and construction periods. However, these technologies have not yet been proven to be commercially viable and scalable.

cases, despite being statistically amongst the safest generation technologies (as discussed in Section 3.4), public opinion of the nuclear industry tends to remain unfavorable in numerous countries. All these factors have translated into very material financial risks from the point of view of investors and creditors, all of which have further contributed to challenges of both utilities and governments to justify large and long-duration capital investments in nuclear projects to their shareholders, investors, consumers and citizenry. Beyond the challenges of investing in new-build nuclear capacity projects, deregulated markets have also created challenging economic circumstances for the investment by power plant owner/operators in reactor life extensions (LTO)[64] of ageing global fleet of existing low-cost, safe and reliable nuclear reactors. It will be amongst IBNI's highest priorities to provide programs and support tailored to facilitate and enable economic reactor life-extension and re-start initiatives which allow for the prevention of early decommissioning of some of the safest, lowest-cost, reliable low-carbon generators available in any market.

In markets such as Russia, China and India, where both the entire nuclear industry and the utilities are largely state-owned and controlled, governments and SOEs have taken the lead role in financing all nuclear projects in those countries and also many of the export markets that Russia and China and their stated supported industries cooperate with abroad.

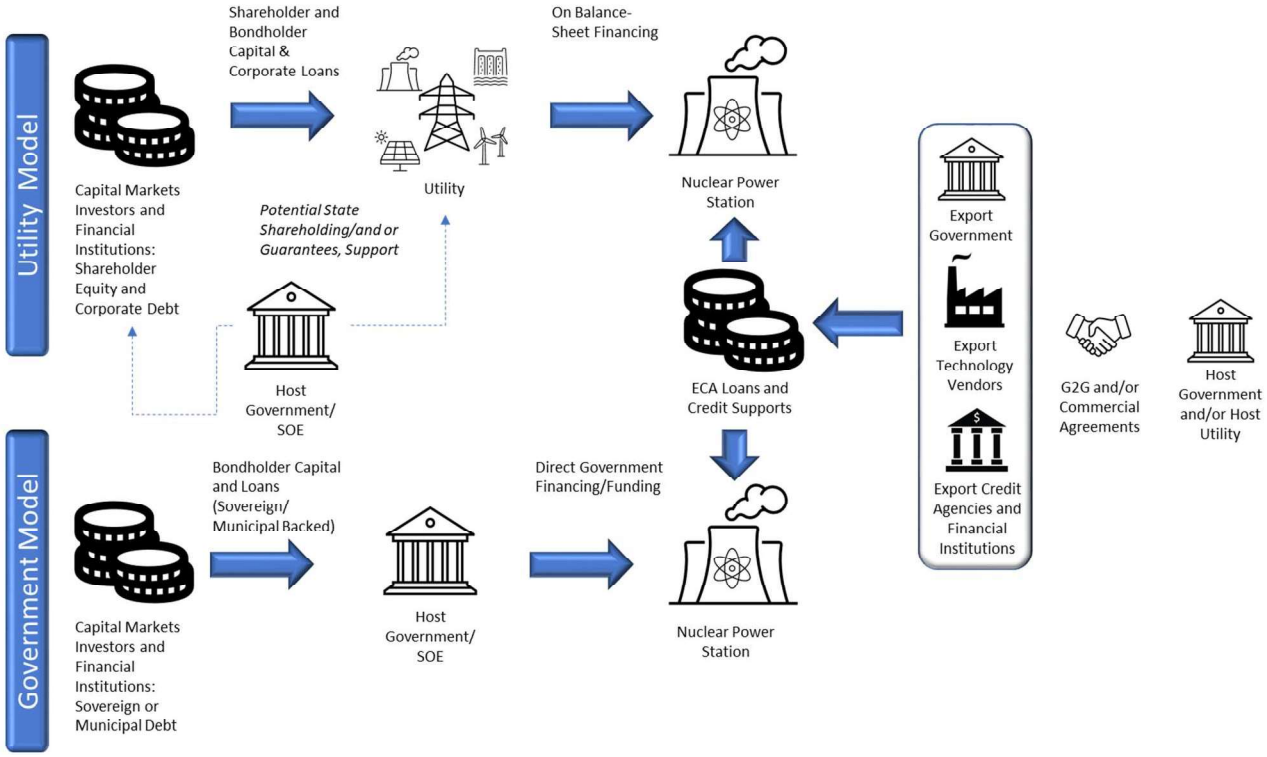
Until the 1990's the majority of nuclear finance models around the world involved domestic utilities and/or governments/SOEs developing NPP projects within the borders of the same country (however, in many cases utilizing licensed nuclear technologies and technology transfer arrangements from, exporting nuclear industries). However, since the 1990's both the utility and Sovereign/SOE models have been applied in the cases of nuclear export and cross-border projects. For example, in the United Kingdom (UK) there is already a long history of attracting other European utilities and other foreign project vendors and equity sponsors which have expanded the UK's nuclear program and capacities. Most recently French utility Électricité de France (EDF) and China General Nuclear Power Group (CGN) have formed a venture to develop the Hinkley Point C (HPC) project. EDF and CGN are financing HPC through their own resources employing a traditional on-balance-sheet utility financing arrangement. Korean utility, Korean Electricity Production Company (KEPCO) serves as a joint venture partner with Emirates National Energy Corporation (ENEC) (in both cases, SOEs) with respect to the Barakah NPP in the United Arab Emirates (UAE).

While the United States had been the dominant exporter of nuclear energy technologies until the 1970's, since the 1970's many other nuclear exporting countries have emerged as their own domestic nuclear programs developed, including France, Canada, Russia, South Korea, Japan and more recently, China. Accordingly, as the world markets for nuclear technologies exports have become increasingly competitive, trade finance such as Export Credit Agency (ECA) and similar export-oriented financing has also become increasingly prominent as it relates to cross-border nuclear transactions. The following diagram illustrates

[64] Even though nuclear LTO offers the lowest VALCOE generation costs in comparison to other technologies (see Section 3.1), market distortions in some deregulated energy markets have made even LTO projects uncompetitive to the extent the utilities may be forced to decommission safe, clean and reliable nuclear reactors well before their potential operational lives, purely based on financial considerations.

the application of ECA/export financing for either the previously described utility or state/SOE led nuclear financing models.

FIGURE 29 - APPLICATION OF ECA/EXPORT FINANCING TO UTILITY OR STATE/SOE MODELS



Source: IBNI-IO SAG

Proposed new IBNI models applicable for Nuclear Power Projects

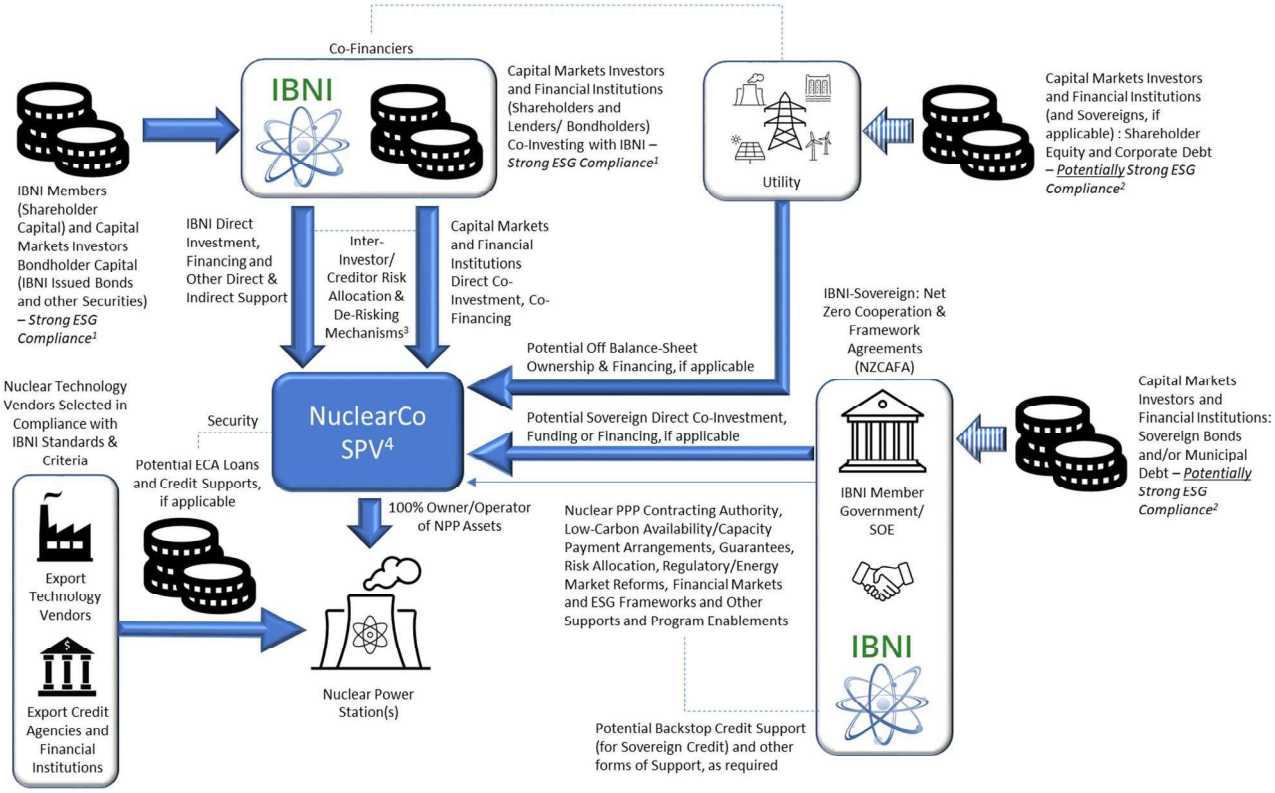
Under some limited circumstances, IBNI may provide direct financing and support to utilities and to governments/SOEs (as illustrated above in the case of traditional nuclear financing) for the development of nuclear projects within IBNI Member States using historical nuclear financing models as described above. However, in most cases the ideal and most suitable financing model will involve the utilization of some variation of a public-private partnership (PPP) model, which in the case of nuclear financing, represents a relatively new and innovative project delivery and financing model[65]. PPP development and financing models

[65] Worldwide, there is one successful PPP-model currently under development, namely the Akkuyu NPP Project in Turkey, which is being delivered under a form of PPP called "Build [Finance]-Own-Operate" (or 'BOO'). However, the Akkuyu project is a G2G transaction which was negotiated between the governments of Turkey and Russia and involves Russian state arranged financing via Russian SOEs involved in the project. Given the G2G framework of Akkuyu, categorizing that project as a PPP transaction may be considered controversial.

have been successfully utilized worldwide across a broad range of sectors and for many applications in countries and markets ranging from highly developed to developing economies.

Application of proven PPP models and structural elements will provide maximum opportunities for private sector investment and participation in IBNI-supported nuclear projects, which will be amongst the central objectives of IBNI in its quest to unlock new sources for capital markets participation in the nuclear sector. Promotion of IBNI and IBNI supported nuclear projects as investments that enable *very strong compliance with ESG performance and reporting* metrics will be a critical and requisite component of IBNI's leadership and catalytic role in driving vast new sources of capital into the nuclear energy sector. IBNI supported PPP models will be applied and will benefit nuclear projects entailing both existing and proven large reactor (generation III/III+) technology as well as new emerging SMR/AR/Generation IV technologies, when they become commercially viable in the future. The following diagram illustrates a potential PPP model and how it will be deployed for a nuclear project.

FIGURE 30 - ILLUSTRATION OF A PROPOSED IBNI-SUPPORTED PPP FINANCING STRUCTURE



Source: IBNI-IO SAG. Notes: (1) IBNI itself shall be structured to achieve strict compliance with a broad range of ESG criteria, which will enable IBNI to report maximum compliance with all relevant international ESG criteria which are evaluated by potential IBNI bond investors and investors in other IBNI-issued securities. Maximum compliance with ESG metrics and maintenance of 'AAA' long-term unsecured credit ratings is expected to maximally drive down IBNI's own costs of capital, which will be passed along to project participants in IBNI Member States. (2) One element of IBNI's Standard and Criteria, will require all IBNI-supported projects to strictly comply with a broad range of ESG performance and reporting criteria. This will enable

IBNI-supported nuclear projects to be considered 'ESG investible assets' by the largest possible number of potential investors, credit providers, insurers and institutions in the global financial markets. (3) The extent to which potential investments in utilities and/or sovereign governments and SOEs (IBNI Member States) are also able to perform and report well under ESG metrics depends on all ESG-related activities of those entities. However, it is envisaged that entering into and complying with long-term Net Zero Cooperation and Framework Agreements (NZCAFA's) will also strongly compel utilities and sovereign entities to also significantly improve their own compliance with a broad range of ESG criteria. (4) A 'Nuclear Company Special Purpose Vehicle' (NuclearCo SPV) will be a new (in most cases) special purpose vehicle (SPV) created for the sole or primary purpose of financing, developing, constructing, owning, operating, maintaining and decommissioning one or more nuclear power stations or nuclear fuel cycle projects. There may be many variants of this structure, based on specific circumstances and local law and regulatory requirements. Readers should specifically observe that use of an SPV does not imply that investment and financing of the SPV will need to be on a full non-resource (project finance) basis, as in almost every case third-party financiers and investors will be insulated from nuclear-specific project risks (which will be provided for through various sovereign and/or IBNI guarantees, risk allocation and de-risking mechanisms, which will essentially de-risk participation in a nuclear project to provide risk and returns profiles that are commonly acceptable to investors in most other infrastructure asset classes and project financings).

As the above illustration provides, under the IBNI-enabled PPP framework, it should be noted that this model does not attempt to replace or supplant existing sources of capital deployment that are currently available for nuclear projects which currently may come from utilities, governments/SOE's, ECA's etc. Instead, the IBNI support model is purposely designed to unlock and enable vast new sources of cost-efficient and long-tenor forms of global capital to participate in well-qualified IBNI-supported nuclear projects through various means.

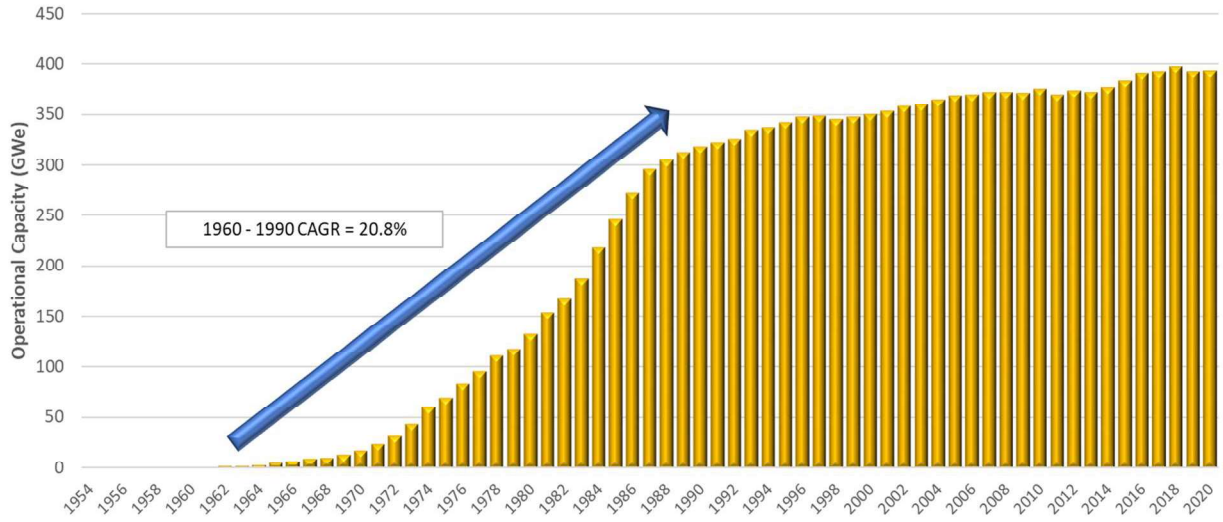
4.1 Current Status of the Nuclear Energy Sector and Nuclear Finance

As mentioned above, while the nuclear industry is currently undertaking applaudable efforts toward broadly categorizing nuclear projects, assets and companies to be included within an 'ESG investable asset class', such categorization will not be nearly enough to persuade a new wave of global investors and financial institutions to participate in the nuclear sector. Over the past four decades, the universe of investors and financial institutions able and willing to support nuclear energy projects (and the broader nuclear industries) has become increasingly limited. Consequentially, access to affordable sources of financing for the entire nuclear value chain is constrained in comparison to most other infrastructure asset classes, which tend to have relatively broad access to financing from cost-effective sources of global financing. These are both the realities and the fundamental problems that IBNI will address and proposes to resolve.

There are numerous explanations for the current condition of the nuclear financing landscape. Much of it is principally 'cause and effect'. Amongst the primary causal factors have been the trends toward energy market deregulation beginning in the 1990s (and in many cases simultaneous subsidization of the fossil fuels and renewables industries), which had the effect of severely contracting both domestic nuclear industries, specifically in North America and Western Europe and which also has precipitated a decline in many countries' nuclear export capabilities. As global demand for new nuclear construction has severely contracted since the global nuclear expansionary period between the 1960s and 1990s, nuclear production

and supply chains, including pools of nuclear engineering and other highly skilled and nuclear specialized human capital have greatly diminished in many markets.

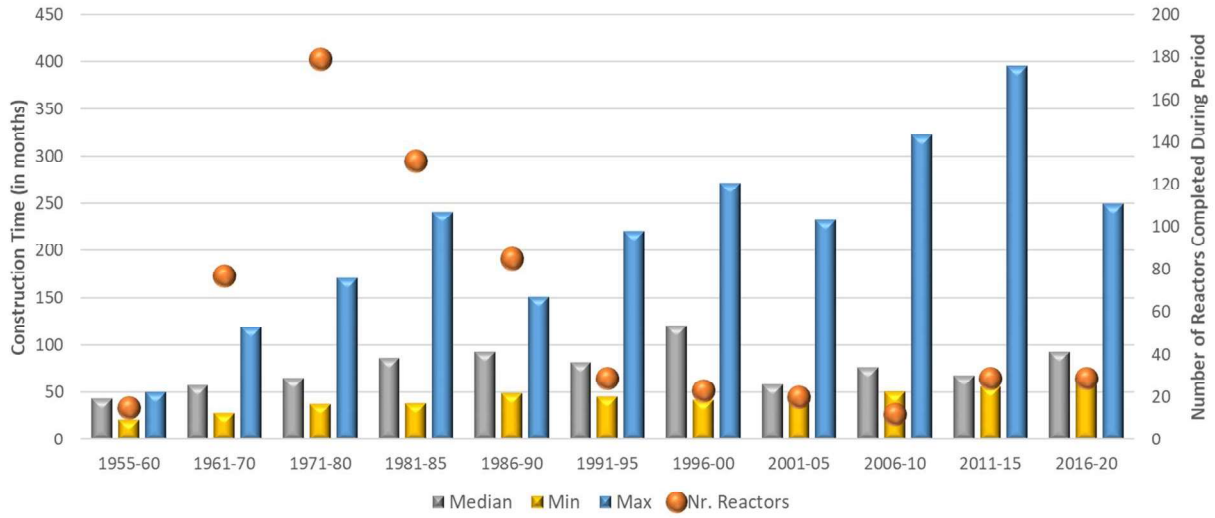
FIGURE 31 - WORLD NUCLEAR INSTALLED GENERATING CAPACITIES (1954 - 2020)



Data Source: [15]

The contraction in global demand for nuclear construction over the last several decades has correspondingly led to significantly diminished resource capabilities throughout the entire value chain ranging from nuclear and specialized manufacturing to local nuclear experienced subcontractors, suppliers and pools of nuclear specialized skilled human resources. The diminished condition of the global nuclear industries and their supply chains, lack of experience and "knowledge-by-doing" and ability to deliver repetitive "n^{th} of a kind" nuclear reactor installations, in combination with increasingly complex and unpredictable regulatory regimes in many countries have been amongst the main contributors toward the trend of very significant cost increases, longer construction times, significant cost overruns and delays for nuclear projects (in particular, in North America and European markets).

FIGURE 32 - HISTORICAL WORLDWIDE NPP CONSTRUCTION TIME SPANS



Data Source: [15]

In many cases, liberalized and unbundled markets have also rendered capital intensive forms of generation, such as nuclear technologies, as uncompetitive against other less capital intensive, smaller and flexible dispatchable fossil fuel technologies (such as gas-fired generation) and technology-specifically subsidized renewables. Additionally, the nuclear industry continues to suffer from a negative public opinion in many markets, which stems from many legitimate concerns about the safety of nuclear reactors (nuclear accidents), storage of radiative waste, and security concerns ranging from terrorism and proliferation of nuclear technologies for military purposes.

All of the above elements have led to a rational determination by the global financial markets that nuclear investments are often viewed as being too large and too risky (both from a financial and reputational standpoint), and ultimately do not have a strong case for long-term sustainability of profits. While solving the 'Nuclear ESG question' is certainly a necessary hurdle to cross and is one key element of the solution, it alone is not likely to be the sole solution that changes global investors' and financial institutions' views on the investment fundamentals of the nuclear sector. The multifaceted issues that are currently inhibiting financial markets from participating in nuclear need a comprehensive solution that only IBNI's leadership and catalytic roles can deliver.

While the nuclear industries in certain countries such as South Korea, Japan, Russia, India and China have been and continue to be more active in nuclear project developments in the decades since the 1970s, this has not had much of an impact on the nuclear markets from a global perspective. Until very recently, of these countries, only Russia has been focused on nuclear export markets to any material extent, while from the 1970s until the early 2000s, Japan's, S. Korea's and China's nuclear industries had each been mainly focused on developing nuclear reactors within their respective domestic markets. Russia has been the most active and most successful nuclear exporter during recent decades, with active and/or completed NPP projects in Egypt, Turkey, Bangladesh, Belarus, Hungary and Uzbekistan. S. Korea's foray into the nuclear

export market has been with respect to the Barakah project in the UAE. China is currently active in the HPC project in the UK and developed the reactors in Pakistan (Chashma 1-4). The United States has also recently signed nuclear export cooperation agreements in Poland and Romania. The French nuclear export industries have recently been active in Finland (Olkiluoto 3) and in China (Taishan). In each if these cases there has been a significant component of export-related financing arranged on a G2G basis involving the respective exporting state, their nuclear export industries and export financing institutions.

Currently, there are some 30 countries that have been involved in the IAEA's Integrated Nuclear Infrastructure Review (INIR) programs[66]. These INIR participant countries are predominantly 'newcomer' countries aspiring to develop domestic nuclear energy programs through the import of nuclear technologies. A common theme amongst all the recently completed, ongoing and new nuclear build projects in such 'newcomer' nuclear markets is that in each case they rely heavily on export financing (in most cases, have been and are dependent upon G2G arrangements between the governments of the host and the nuclear exporting counties). The following table illustrates the financing models and the sources of financing deployed for recent and planned NPP projects worldwide.

TABLE 1 - RECENT AND PROPOSED NUCLEAR POWER PLANT FINANCING STRUCTURES

Country	Plant Name	Capacity	Construction Start	Financing Model	Financing Sources
Bangladesh	Rooppur 1-2	2x1200MW$_e$	2017	State	Sovereign funding and export credit provided by Russian SOEs
Belarus	Belarusian 1-2	2x1100MW$_e$	2013	State	Sovereign funding and export credit provided by Russian SOEs
Brazil	Angra 3	1x1340MW$_e$	2010	Utility	Eletrobras Elecronuclear S.A. (SOE)
China	Changjiang 3	1x1000MW$_e$	2021	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Fangchenggang 3-4	2x1000MW$_e$	2015	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Fuqing 6	1x1000MW$_e$	2015	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Hongyanhe 5-6	2x1061MW$_e$	2015	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Sanaocun 1	1x1117MW$_e$	2020	State	CGN (CEO) equity, China Development Bank, Bank of China
China	Shidao Bay 1 (HTGR)	1x500MW$_e$	2012	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Taipingling 1-2	2x1116MW$_e$	2019	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Taishan 1-2	2x1750MW$_e$	2010	Utility, JV	EDF and CGN equity (SOEs) , China Development Bank, Bank of China, Société Générale
China	Tianwan 5-6	2x1000MW$_e$	2015	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Xiapu 1 (FBR)	1x642MW$_e$	2017	State	Chinese State/SOE equity, China Development Bank, Bank of China

[66] Source: [40]. Reference is made to the number of countries where IAEA has provided INIR missions to since 2009.

Country	Plant Name	Capacity	Construction Start	Financing Model	Financing Sources
China	Xudabu 3	1x1200MW$_e$	2021	State	Chinese State/SOE equity, China Development Bank, Bank of China
China	Zhangzhou 1-2	2x1126MW$_e$	2019	State	Chinese State/SOE equity, China Development Bank, Bank of China
Egypt	El Dabaa 1-4	4x1200MW$_e$*	2021*	State	Sovereign funding and export credit provided by Russian SOEs
Finland	Olkiluoto 3	1x1720MW$_e$	2005	Utility (Mankala)	TVO (Cooperative) Equity and Credit, SEK and Coface (BPI France) (ECAs) and Commercial Bank Credit Facilities[67]
France	Flamanville 3	1x1650MW$_e$	2007	Utility	EDF (SOE) equity
Hungary	Paks II 1-2	2x1200MW$_e$	2021	Utility	MVM (SOE) equity funding and export credit provided by Russian SOEs
India	Kakrapar 3-4	2x700MW$_e$	2010	State	Indian State budget
India	Kundankulam 3-4	2x1000MW$_e$	2017	State	Indian State budget
India	Prototype Fast Breeder Reactor	1x500MW$_e$	2009	State	Indian State budget
India	Rajasthan 7-8	2x700MW$_e$	2011	State	Indian State budget
Japan	Ohma	1x1328MW$_e$	2010	Utility	J-Power (IOU) equity
Japan	Shimane 3	1x1325MW$_e$	2006	Utility	Energia (IOU) equity
Pakistan	Chashma 3-4	2x340MW$_e$	2005	State	Host government funding and Chinese (exporter) sovereign and bilateral financing
Pakistan	Kanupp 2-3	2x1100MW$_e$	2015	State	Host government funding and Chinese (exporter) sovereign and bilateral financing
Poland	Zarnowiec 1-6*	6x300MW$_e$*	2025*	Utility	PGE (SOE) and USDFC (ECA) Credit Facility
Romania	Cernavodă 1-4 (LTO & New Build)*	2x650MW$_e$ 2x720MW$_e$*	2022*	Utility	SN Nuclearelectrica (SOE) and USDFC (ECA) Credit Facility
Russia	Akademik Lomonsov 1-2 (Floating)	2x30MW$_e$	2007	State	Rosatom Group (SOE) Russian state funding
Russia	Baltic 1	1x1109MW$_e$	2012	State	Rosatom Group (SOE) Russian state funding
Russia	Kursk II 1-2	2x1175MW$_e$	2018	State	Rosatom Group (SOE) Russian state funding
Russia	Leningrad II 1-2	2x1066MW$_e$	2008	State	Rosatom Group (SOE) Russian state funding
Russia	Novovoronezh II 1-2	2x1100MW$_e$	2008	State	Rosatom Group (SOE) Russian state funding
Russia	Rostov 3-4	2x1000MW$_e$	2008	State	Rosatom Group (SOE) Russian state funding
Saudi Arabia		2x1000MW$_e$*	2025*	State*	TBD – Ongoing competitive process for technology vendor(s) and potential financing sources.

[67] Source: [41] – Slide 41. Includes a consortium of commercial banks, including Bayerische Landesbank, BNP Paribas, JP Morgan Chase, Nordea and Svenska Handelsbanken.

Country	Plant Name	Capacity	Construction Start	Financing Model	Financing Sources
S. Korea	Shin Hanul 1-2	2x1340MW$_e$	2012	Utility	KHNP (KEPCO) (SOE) equity
S. Korea	Shin-Kori 5-6	2x1340MW$_e$	2017	Utility	KHNP (KEPCO) (SOE) equity
S. Korea	Shin-Wolsong 1-2	2x997MW$_e$	2007	Utility	KHNP (KEPCO) (SOE) equity
Turkey	Akkuyu 1-3	3x1200MW$_e$	2018	BOO (PPA)	Rosatom Group (SOE)
United Arab Emirates	Barakah 1-4	4x1345MW$_e$	2012	Utility (PPA), JV with Sovereign and ECA Financing and Support	ENEC & KEPCO Equity (SOEs), Government of Abu Dhabi Direct Loan, First Gulf Bank, National Bank of Abu Dhabi, HSBC, Standard Chartered, KEXIM and USEXIM (ECAs) Loans
United Kingdom	Hinkley Point C	2x1630MW$_e$	2018	Utility (CfD), JV	EDF & CGN equity (SOE)
United States	Vogtle 3-4	2x1250MW$_e$	2013	Utility	Southern Company (IOU) equity and USDOE Loan Guarantees
Uzbekistan		2x1200MW$_e$*	2023*	State	Sovereign funding and export credit provided by Russian SOEs

*Data Sources: [16], [41], press releases, company websites and other publicly available information. * Indicates projects that are proposed or planned and such dates and other parameters may be subject to change.*

As the preceding table indicates, there are currently a dearth of options for financing models and sources of financing for most nuclear energy projects outside the historical utility and state/SOE financed models and the government-to-government (G2G) nuclear export models described above.

Currently, there is a major transformation occurring in the global financial markets, where investors are increasingly demanding that the assets and companies that they invest in meet emerging new ESG sustainability metrics and criteria. While ESG-focused investor initiatives and "sustainability taxonomies" are increasingly driving large sources of capital into many low carbon and "green" industries and asset classes, including renewables, hydrogen and energy storage, ESG has not yet unlocked prospective additional new sources global capital available for nuclear industry projects and investments. The ESG transformation should be viewed as an enabling condition, but it alone is not likely to be sufficient to unlock significant new sources of capital available for nuclear power projects. IBNI will need to take the leading and catalytic role in driving new sources of capital into nuclear sector projects.

Under G2G and nuclear export transactions, financing from Export Credit Agencies (ECAs) and similar export-oriented trade credit institutions have become prominent financing sources for many nuclear export projects. However, these ECA-dependent financing models tend to tie nuclear technology choices to financing availability, often distorting host countries choices of the best technological and value solutions most appropriate for the needs and applications within the host country's energy markets. The G2G models often lead to expansion in nuclear capacity being dependent on the strategic and diplomatic contingencies and geopolitical relationships.

Furthermore, the existing multilaterals, including World Bank Group, ADB, EBRD, AIIB, etc.) are currently unable or unwilling to finance the nuclear sector; and many are explicitly prohibited from doing so (EBRD will finance decommissioning and certain spent-fuel related projects, but not new construction, reactor life

extensions or refinancing of nuclear power plants). However, to the extent that any existing or other new MDB becomes able and willing to financing nuclear power in the future, this would be a most welcome development and IBNI would work along-side other IFIs, similar to the way in which existing MDBs often work in collaboration to finance large infrastructure projects in other sectors. The potential for future participation by other MDBs and IFIs in nuclear infrastructure does not obviate or diminish the need for and the rationale for IBNI, as nuclear financing is very different from other forms of infrastructure and development financing, which requires specific leadership and specialized skill sets that only IBNI will be able to deliver.

Similar to most other forms of low carbon generation, nuclear new-build projects are extremely capital intensive – with capital and investment costs often making up more than 50% of the levelized cost of electricity from such projects[68] – meaning that the cost of financing is a key determinant of project viability and the affordability and competitiveness of nuclear power and a clean and reliable generation option. The current nuclear technologies and markets have evolved toward very large reactor sizes (typically in excess of 1 GW_e installed capacity), which has resulted in very large (multiple US $ billions) capital costs and long construction periods (often in excess of seven (7) years). The required total investment volumes, long construction time frame and potential for cost overruns and delays, and many other unique characteristics, each present unique and challenging financing risk elements which pertain to nuclear[69].

IBNI is needed to accelerate investment in a vast global expansion in and also to drive affordability of nuclear capacity, including supporting the deployment of new innovative nuclear technologies, life extensions and restarts of existing nuclear reactors and nuclear fuel -cycle projects.

It should be emphasized that IBNI will be a technology/vendor neutral multilateral institution dedicated to financing nuclear energy projects at all stages of their development. A key IBNI offering will be support for technology neutral project development work (e.g. incentives for project sponsors to conduct open and transparent international procurement of nuclear technologies).

IBNI will establish and enforce rigorous standards and criteria (see Section 5) that all project sponsors receiving IBNI support will be compelled to adhere to, which will ensure the highest possible adherence to safety, security & safeguards; environmental, social and governance (ESG); commercial/risk allocation; market; regulatory; economic development, procurement and other key standards and criteria.

In contrast to private sector banks' overriding focus on maximizing shareholder value as measured in purely financial returns over the short-term, IBNI will recognize the broader societal benefits (and returns) arising

[68] However, nuclear life-extension and renewal projects (LTO) are typically significantly less capital-intensive. See discussions in Section 3.1.

[69] Emerging new Small Modular Reactor (SMR) and Advance Reactor (AR) designs and related technologies and their associated business models offer promising solutions that may help mitigate many of the financing and risk challenges facing the nuclear industry. However, SMR and AR technologies are generally not commercially proven at this time and therefore the initial and immediate focus of IBNI shall be on financing and rapidly deploying existing and proven nuclear technologies (generation III/III+ reactor designs), while at the same time supporting rapid development, commercially proving and scaling-up new emerging SMR/AR technologies and applications and further innovation and R&D in these areas.

from investments in low carbon nuclear generation – including valuing returns in the form of GHG mitigation benefits and related performance-based indicators - and will also take a more long-term and flexible approach to lending and investing in nuclear projects (as is appropriate for very long-lived capital-intensive assets which typically have 5–7 year construction durations and 60+ year effective operational lives).

IBNI will structure its financing instruments in ways that reflect an understanding of the unique risk profile of nuclear projects, and a willingness to appropriately share these risks, by taking a longer-term view on a total project life-cycle risk basis – albeit in the limited sense appropriate for a lending institution, by applying established international best practices in operation, financing and risk management for IFI organizations.

IBNI will build on its institutional understanding of the risks attendant on nuclear projects – and approaches to their mitigation - to determine and encourage appropriate 'ownership' of residual risks in any nuclear power plant transaction in which IBNI supports.

There is a clear and justifiable public policy rationale for governments' support for nuclear in a space in which there is textbook 'market failure' (the existence of externalities in the form of GHG and other emissions) which may be only partially monetized for nuclear generation - and internalized for fossil fueled generation - by carbon pricing and other arrangements; a case could likely also be made for intervention to support the diffusion of new technologies such as Small Modular and Advanced Reactors.

4.2 Critical Leading Roles that IBNI will play in the Nuclear Power Sector

As mentioned above, IBNI will need to take on both a *leadership* and a *catalytic* role in the global nuclear energy sector. IBNI will serve as the lead "anchor" investor and/or lender directly in well-qualified nuclear power projects within IBNI member countries that apply for IBNI support. IBNI will take on a lead role both in appropriately structuring a project (from a commercial/risk, financial, legal and technical perspective) and also a higher-level leadership role which will compel the member country to enact necessary energy market and regulatory and other policy frameworks that will support nuclear on a "level playing field" together with all forms of low-carbon generation in a long-term fair, equitable, affordable and sustainable manner. In each IBNI supported project, the Bank will impose and enforce a rigorous set of internationally accepted standards and criteria, specifically including uniform and harmonized ESG performance and reporting criteria (see Section 5 for more details on IBNI Standards and Criteria) amongst other standards and criteria. IBNI's participation in well-qualified nuclear projects that it supports will be designed to encourage and promote incremental participation in IBNI and in IBNI supported projects from a large share of the global capital markets and financial institutions. This 'multiplier effect', where every dollar of government shareholder investment in IBNI results in multiple dollars of nuclear infrastructure investment, is a model analogous to those that have been implemented and proven successful by many of the world's IFIs that have been in existence for many decades. See Section 4.3 below for a discussion on how IBNI will attract new source of capital for nuclear projects.

IBNI will achieve the aim of significantly expanding nuclear capacities in an affordable and sustainable manner through three levels of leadership.

First, at the country level, for each IBNI member states that requests participation in IBNI's support program, that country will be obligated to sign a long-term Net Zero Cooperation and Framework Agreement (NZCAFA). The NZCAFA will be a comprehensive legally binding agreement (between IBNI and the sovereign) and enforceable through cross-default mechanisms across all IBNI financing agreements and other support agreements issued through IBNI and each of its co-financiers within that country. Amongst other items, each NZCAFA may encompass that member country's specific commitments toward broad net zero/decarbonization commitments and firm policies (enforcement of NDC commitments); energy market, regulatory, environmental and economic reform policies; transition away from fossil fuels; electrification policies; carbon pricing; and many other elements which will be tailored to reflect the specific circumstances, realities and preferences of each member country. The consequences of an IBNI member country defaulting under its NZCAFA obligations will be intentionally quite severe and are therefore expected to result in an extremely low default rate.

Second, at the IBNI supported nuclear project level, the terms and conditions within each IBNI financing and other IBNI support agreement will be project specific. Project level IBNI financing and support agreements will contain terms and conditions that are specific to the requirements of the project but will require compliance with IBNI's applicable Standards and Criteria[70]. Project level IBNI agreements will also become the basis for the optimal *downside* risk and *upside* profit potential amongst the project stakeholders, which may include the IBNI, the IBNI Member State government/SOE, third party co-financiers, utilities, contractors/vendors, etc.

Third, in each IBNI-supported project the Bank will take on a leadership role as the long-term *patient* investor and/or lender. Providers of commercial debt capital (such as bond investors or and commercial lending institutions) are understandably focused on "full and timely payment" of scheduled principal and interest and protections against *downside* risk and stress case scenarios. Providers of equity capital (equity sponsors) are typically focused on the prospect of earning at least a targeted minimum rate of equity return over a finite time horizon, in exchange for prudently managing a project and controlling *downside* risk elements. In both cases, IBNI's leadership as the long-term *patient* investor or lender will be critical. In each IBNI supported project, IBNI will be in a unique leadership position to optimally structure the project agreements, inter-

[70] IBNI Financing and Support Agreements will be negotiated between the specific nuclear project sponsor(s) in the IBNI Member Country. The terms and conditions under each agreement will be discretely enforced for each project (e.g. will not trigger cross-default on other IBNI supported projects in the country). However, the participating IBNI Member State will also be a party to each IBNI Financing or Support Agreement issued in the country and the terms of that country's NZCAFA will be enforceable under each project level agreement. Therefore, default under the terms of the NZCAFA will trigger a cross default across all IBNI and other co-financiers' financing and support agreements in that country. Project level participants would be indemnified in the case of the IBNI member state's default under the terms of their NZCAFA.

shareholder and inter-creditor agreements, where project *downside* risks, *upside* profits potential are optimally allocated amongst all project stakeholders, and in particular, amongst project's co-financiers.

4.3 IBNI Will Attract New Sources of Capital for Nuclear Sector Projects

As described above, one of IBNI's critical and overriding objectives will be to *catalyze* additional and incremental private capital into the nuclear energy sector on a global scale. This will include a deliberate effort to drive new and additional sources of capital from the global financial markets and from financial institutions into the nuclear energy space. IBNI will target such capital investments from the financial markets at two levels: 1) as direct investments in IBNI's bonds and other IBNI securities issued in the global markets; and 2) as co-investment alongside IBNI in well-qualified IBNI-supported nuclear projects within IBNI Member States. The specific plan to catalyze capital investments at these levels is more fully described below.

Global Capital Markets Investments in IBNI

It is proposed that IBNI will initially be capitalized with shareholder (common equity) capital from the coalition of IBNI Member States. A portion of the shareholder capital from the IBNI Member States will be paid-in shares and another portion will be in the form of callable shares. The allocation of shareholder pledges amongst the IBNI membership is likely to be allocated on the basis of national GDP or other equitable and fair methodology. It is further envisaged that ratio of paid-in equity to callable equity capital will gradually decrease over time as the credit fundamentals of the Bank evolve over time. This capitalization structure is analogous to the models that have been in existence and proven amongst the universe of major MDB's that been in existence for many decades. This proposed ownership, governance and capitalization structures of IBNI are more fully described in Section 6 of this report.

In addition to the shareholder (equity capital) component of IBNI, the Bank will also raise debt capital (and in the future may also include preferred equity and other forms of quasi-equity capital) in the global financial markets. Issuing long-term bonds and other forms of securities is also common amongst the major existing MDBs. Also, as all of the major MDBs have successfully achieved and continue to maintain the highest 'AAA' long-term credit ratings, it is expected that IBNI will also achieve such highest 'AAA' category ratings. IBNI will also be structured "from the ground up" to achieve the very highest 'ESG performance criteria' and allow the Bank to report in the most favorable manner against a broad range of uniform 'ESG performance metrics' applicable to inter-governmental organizations (IGOs).

The combination of highest possible credit rating and strongest ESG reporting metrics (so-called 'ESG ratings') will allow IBNI to attract a broad range of investor interest. Existing MDB's such as World Bank Group, EBRD, ADB, AfDB, AIIB, etc. attract many of the same investor classes that typically invest in other sovereign based securities. This includes a universe of investors including governments, sovereign wealth funds, sovereign

bond funds, corporations, investment and asset managers and other investor classes. Globally, the size of the Sovereign, Supranational and Agency (SSA) bond market is currently estimated to be US $87.5 trillion[71].

It is proposed that IBNI will offer its bonds sand other securities on many of the world's established public exchanges and also through private placements and/or limited offerings in a variety of currency denominations within numerous IBNI Member States, where it is cost efficient. As a large and repetitive issuer, IBNI will also be ideally suited to become a lead "market maker" for 'highest investment grade green/sustainable SSA bonds' and other ESG compliant securities in many diverse markets. Combining all of these elements will create the mutually beneficial circumstances for IBNI and its program member participants, whereby:

- IBNI will be able to access a very significant and broadly diversified global pool of investors, which will maximally drive down its own cost of capital, which will be passed along to IBNI program participants;
- IBNI will diversify its currency exposures across many different currencies in the markets that it serves, which will allow IBNI to accept increased local currency exposures in many of the IBNI member states markets that it serves;
- IBNI will serve as a lead "market maker" for 'green/sustainable bonds' and other ESG compliant securities in many of the capital markets within IBNI members states; and,
- IBNI will routinely also enter into derivative transactions, such as interest rate, currency and inflationary swaps and other hedging products with qualified broker-dealers and using its 'AAA' ratings, will minimize the credit spreads on all such transactions.

None of the above represents anything representing anything necessarily "new, different and unproven". Existing world MDBs have been implementing and continue to successfully implement many similar programs for the benefit of their members.

Global Financial Markets Participation in IBNI-Supported Nuclear Projects

The second and extremely important leg of global financial market participation, entails IBNI's leadership and catalytic roles in driving global capital markets and financial institutions into IBNI-supported nuclear projects at the project level.

IBNI will be uniquely situated to restore and build market confidence in the global nuclear sector from a broad universe of investor and lender co-financiers, who will be expected to participate along-side of IBNI in the nuclear projects that it supports. Adopting the same proven fundamentals used by existing MDBs to catalyze co-investments in otherwise challenging market situations, amongst IBNI's main objectives will be to realize a similar "multiplier effect". The main principle that for every dollar of IBNI's direct support in a

[71] Source: [42]. The largest component of the SSA bond market includes sovereign bond issues from many of the world's highest rated issuers.

project, additional multiples of cost-efficient capital will become available from the global financial markets. While it is anticipated that IBNI will need to provide a more significant share

Acting as the 'patient long-term' provider of capital, IBNI will have a great deal of flexibility to access a wide array financial tools and strategies in effort to sufficiently 'de-risk' each nuclear project in effort to attract a broad universe of cost-efficient capital sources from the global financial markets. IBNI will lead the negotiations and structuring of project agreements and will be a party to numerous agreements, including inter-shareholder and/or inter-creditor agreements, which will be tailored to efficiently, cost-effectively and appropriately allocate risks and upside profit potentials amongst IBNI and its co-financiers (which may also include utilities, ECA's, other public or private sector shareholders and lenders, as the circumstances may be), the host government/SOE and contractors. For example, in current market environments project cost overrun and delay risks may not be efficiently absorbed by entirely by nuclear EPC contractors and equipment suppliers, and these risks are also too great for the financial markets, IBNI's unique 'patient investor' role may allow it to provide necessary contingent equity, contingent credit facilities and backstopping guarantees.

Sufficiently 'de-risking' nuclear projects from a financial markets perspective, may also take on many other forms. It is intended that IBNI will have a very high degree of flexibility and latitude to tailor solutions to the wide and diverse array of specific needs and challenges that different nuclear projects face in different countries and market environments. In some IBNI cases may be willing to provide a disproportionately higher share of its capital injected during the early stages of the development and construction period, allowing co-financiers to inject a greater share of their capital later in the construction period ("back-loading" the private sector capital) after certain milestones have been achieved and the project is less risky. In other cases, IBNI and a group of initial co-financiers (and the host government) may determine that it is preferential to take on all of the "greenfield" construction risks and then sell shares at a premium and/or refinance, at gain, all or most participation in project after it achieves commercial operations and the assets are fully 'de-risked' from a development and construction risk perspective. This latter scenario may be appropriate in the case of new market scenarios, "first of a kind" (FOAK) reactor technologies, demonstration projects, etc. where there may be inadequate investor interest from cost-effective sources of capital.

IBNI may provide both senior *pari passu* and subordinated loans and other credit facilities, minority common or preferred equity shareholding, mezzanine financing, convertible loans, letters and lines of credit, guarantees, and hedging solutions (including interest rate, inflation and currency swaps). In addition to direct provision of financial products and solutions, IBNI will also assist qualifying project sponsors in IBNI Member States by providing a range of professional transaction and financial advisory services. Please see Section 7 for details on IBNI's proposed programs and operations.

Through NZCAFA and other agreements between IBNI and the IBNI member government, certain risk elements such as change in law, change in tax, change in regulation risks will also be allocated amongst IBNI and the host government. Generally, those risks directly and indirectly relating to *political force majeure* and/or *events of government action or inaction* (EGAI) will constitute relief events secured by government

guarantee. Any breach in the terms of the NZCAFA, which triggers cross-default at the project(s) level would be an example of an EGAI where the host government would typically be expected to provide relief to the project counterparty (given compliance with all NZCAFA contractual items will be deemed to be under the control of the host government). In cases where it is necessary or desired for sovereign guarantees to be in place, and where the host government's (or SOE's) sovereign credit may be insufficiently strong, IBNI may also provide sovereign credit backstop or guarantee or credit wraps using it 'AAA' credit rating to further credit enhance the strength of sovereign guarantees.

Given the current status the global nuclear industries and insufficient global financial markets' participation in nuclear projects, it is expected that IBNI will generally provide a higher share of direct financing in projects in the early program years and the ratio of IBNI to co-financing from the financial markets with progressively decline over the next three decades. It is envisaged that IBNI will directly finance between 20% and 70% of total project capital costs (including contingencies, interest during construction, financing costs, etc.) As the financial markets become sufficiently experienced and confident in IBNI-supported projects, and therefore a successful track record of many projects can be demonstrated, this is expected to translate into the availability of a large global universe of cost-efficient private sector debt and equity capital available for nuclear projects, which will decrease the need for a large share of direct IBNI capital in projects. As the program evolves into the 2030's and 2040's, IBNI's primary role is expected to transition more toward the role of transaction facilitator, arranger and structuring agent and to a lesser degree on the role of direct financier.

4.4 IBNI and Sustainable Investment Criteria

As mentioned above, IBNI will be in a unique position to lead the global nuclear industry in the new and emerging era of sustainable investment initiatives developing in global financial markets. IBNI, as an IFI organization will be "designed from the ground up" to perform and allow it to report well against a broad range of ESG criteria. Taking all reasonable efforts to comply with emerging ESG investment standards and criteria, 'green taxonomies' and 'sustainable taxonomies' will not only allow IBNI to access the broadest universe of global investors for IBNI issued bonds (including "green and sustainable bond", "climate impact bond" and "social impact bonds" programs and other similar bond programs) and other securities, will not only benefit IBNI and its members by minimizing its cost of capital, but will also compel all stakeholders in IBNI-supported projects to comply with such requirements. These stakeholders will include IBNI's co-financiers (including equity investors, financial institutions, bond investors, and utilities), contractors, suppliers, insurers and host governments.

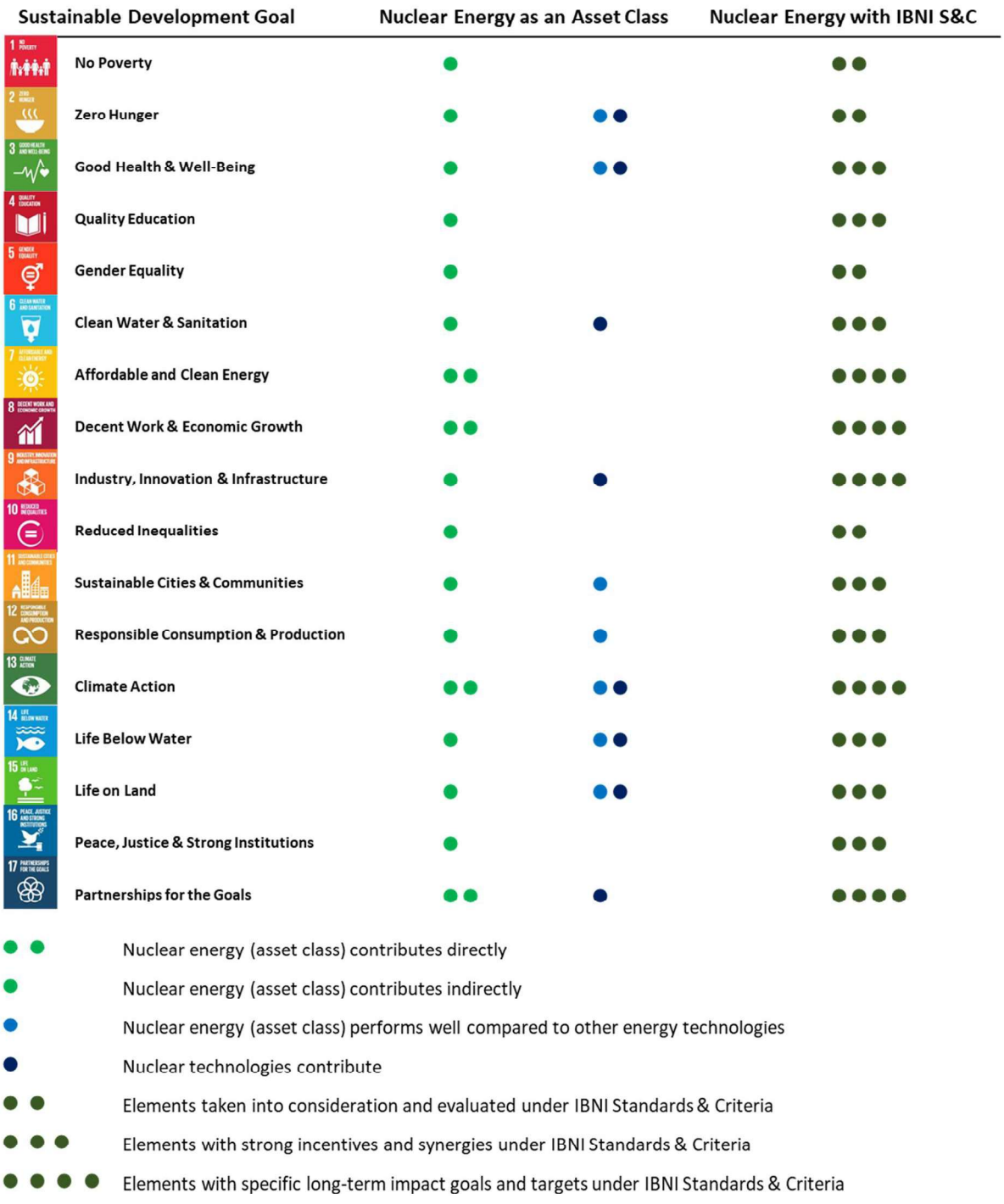
Imposition and enforcement of IBNI's uniform set internationally accepted nuclear-specific Standards and Criteria (See Section 5) will provide assurance that all stakeholders in each IBNI-supported project will adhere to a rigorous set of standards, ranging from nuclear safety, security and safeguards; ESG performance and compliance; procurement and anti-corruption frameworks; sensible commercial and risk-allocation principles; sustainable long-term energy market, regulatory, industrial and economic development policies;

and many other sets criteria. Unlike almost all other infrastructure asset classes, there are currently no uniform sets of criteria specific to nuclear projects similar to existing criteria applicable for other asset classes, such as the World Bank's Environmental and Social Standards (ESS); IFC E&S Performance Standards; EBRD Environmental and Social Policy Guidelines; ADB Environmental and Social Safeguards Framework; Equator Principles V; World Economic Forum ESG Principles; SASB ESG Standards and Frameworks and TCFD ESG Recommendations and Disclosures. IBNI's Standards and Criteria will provide a uniform integrated set of nuclear-specific standards, performance and reporting criteria which will allow IBNI-supported projects and their related stakeholders to achieve the highest levels of performance and report well against a very broad range of criteria.

ESG and other sustainability performance and reporting requirements under IBNI's Standards and Criteria will be enforced through various project agreements ranging from the NZCAFA (signed between IBNI and the host government), financing agreements (signed between IBNI and co-financiers with the project company) and other project agreements which have each will have performance and reporting implications for contractors, suppliers, utilities, ECAs, etc.)

IBNI will enhance the ability of nuclear assets and projects to comply with the foundational principle of all ESG evaluation regimes, which are the SDGs. Below, we assess both the 'stand alone' nuclear asset classes' contribution to SDGs and also the additional contributions under IBNI frameworks.

FIGURE 33 – NUCLEAR ASSET CLASS AND IBNI'S CONTRIBUTIONS TOWARD SUSTAINABLE DEVELOPMENT GOALS (SDGS)



Sources: Nuclear as an Asset Class: [44]. Nuclear Energy with IBNI S&C: IBNI-IO SAG.