

19 Accelerating Infrastructure Development



Accelerating Infrastructure Development

The Build, Build, Build (BBB) Program managed to overcome several implementation challenges in the first half of the Plan period, having increased infrastructure spending to more than five percent of the gross domestic product (GDP) in 2018, twice more than the average spending over the past five decades. The progress of the Program is a confirmation of the government's strong resolve to strategically and decisively improve the country's infrastructure through the development of a robust pipeline of massive capital investments, including priority high-impact projects, and the implementation of game-changing reforms.

The unprecedented challenges brought by the COVID-19 pandemic, however, is expected to alter the overall infrastructure development agenda. The resource requirements of the response to the pandemic is expected to reduce the fiscal space initially allotted for the portfolio of investments and could slow down the movement and implementation of programs and projects. On the other hand, the government is also keen in using BBB as an instrument for socioeconomic recovery.

The resumption of rollout of activities under the BBB Program and the continuous investment in infrastructure are vital to stimulating the economy and facilitating recovery with their potential multiplier effects on creating jobs and stimulating growth. Bolstering infrastructure is instrumental in ensuring business continuity, development of agglomeration economies, creation of new urban centers, delivery of essential government services, and transitioning into the digital economy. Accordingly, the government reassessed its strategies and targets for the remaining Plan period to ensure that these remain relevant and achievable in the face of the "new normal" and in pursuit of a healthy and resilient Philippines. Even while facing constraints brought about by the pandemic, government will remain mindful of the longer-term development goals requiring early interventions.

Assessment and Challenges

Assessment: During the first half of Plan implementation, frameworks, laws, and policies were introduced for various infrastructure sub-sectors: (a) National Transport Policy (NTP) and its implementing rules and regulations (IRR);

(b) streamlining of regulatory procedures for energy projects; (c) formulation of the framework for use of energy-efficient technologies; (d) enactment of the means to lower electricity costs; (e) adoption of the framework for the Public

School of the Future; (f) Philippine Health Facility Development Plan to guide and ensure the rational allocation of investments for public health facilities, upgrading and development, including the Health Facilities Enhancement Program; and (g) government-initiated investments in the enhancement of the digital infrastructure through the National Broadband Program.

Challenges: The COVID-19 pandemic has posed serious challenges to resource mobilization and implementation of the BBB Program, particularly in terms of: (a) availability of fiscal space for the target infrastructure program; (b) conceivable delays in project preparation, procurement, and/or implementation due to disruption of work of contractors, professionals/experts/engineers, and workers/laborers involved in the projects; (c) possible interruption of importation of construction materials due to disruption to labor and materials supply; and (d) change in demand for infrastructure services, which could affect the financial viability and

therefore appetite of investors, particularly in public-private partnership (PPP) projects. In addition, increase in costs of infrastructure projects may be expected due to requirements for social distancing and other health precautionary measures and protocols.

Amidst the challenges of the pandemic and transitioning to the “new normal,” the government will have to continue and step up efforts to address increasing demand for infrastructure, especially health and water facilities, which have been and continue to be critical in the fight against COVID-19, right-of-way issues, lack of updated and integrated infrastructure data, and regulatory environment issues. At the same time, the remainder of the reform agenda will still be pursued — creation of an apex body for water resources and an independent economic regulator for water supply and sanitation; and amendments to the National Economic and Development Authority (NEDA) Joint Venture (JV) Guidelines.

Targets

The Plan targets for FY 2020-2022 were revisited and updated considering infrastructure development, as a pivotal strategy to pump-prime the economy and with the strong recognition that each sector of the economy essentially requires infrastructure

emerging from the COVID-19 pandemic and transitioning further into the path of recovery and resiliency. Table 19.1 shows the success indicators and updated targets for infrastructure development.

Table 19.1 Updated Targets to Accelerate Infrastructure Development

INDICATOR	BASELINE VALUE (YEAR)	TARGETS			
		2020	2021	2022	END OF PLAN
Public infrastructure spending increased (in % share in GDP) ¹	4.1 ² (2016)	4.20	5.40	4.50	4.50
Transport Infrastructure					
Road Transport					
Travel time (decreased) via land per key corridor (in hours)					
Metro Manila	2.97 (2016)	3.12	3.11	3.11	3.11
N1/Pan – Philippine Highway (Laoag-Zamboanga)	61.12 (2016)	50.94	48.39	45.84	45.84
Manila – Baguio	7.04 (2016)	5.86	5.57	5.28	5.28
Manila – Pagudpud	13.36 (2016)	11.13	10.58	10.02	10.02
Manila – Cagayan	12.11 (2016)	10.09	9.59	9.08	9.08
Manila – Clark	2.80 (2016)	2.34	2.22	2.10	2.10
Clark – Subic	2.09 (2016)	1.75	1.66	1.57	1.57
Manila – Batangas	3.46 (2016)	2.88	2.74	2.60	2.60
Iloilo – Capiz	2.62 (2016)	2.18	2.07	1.96	1.96
Surigao – Davao	7.10 (2016)	5.92	5.62	5.33	5.33
Butuan – Iligan City	5.80 (2016)	4.83	4.59	4.35	4.35
Cagayan De Oro – Davao City	5.70 (2016)	4.75	4.51	4.27	4.27
Bacolod – Dumaguete – Bayawan	8.46 (2016)	7.05	6.70	6.35	6.35

¹ On July 28, 2020, the Development Budget Coordination Committee (DBCC) adopted via Ad Referendum the revised macroeconomic assumptions and fiscal targets for FY 2020 to FY 2022, in line with the fiscal impact of the COVID-19 pandemic. Accordingly, the government's programmed spending on infrastructure were revised.

² Actual disbursement based on the Department of Budget and Management's (DBM) 2019 Budget of Expenditure and Sources of Financing.

INDICATOR	BASELINE VALUE (YEAR)	TARGETS			
		2020	2021	2022	END OF PLAN
Danao – Cebu – Santander	4.61 (2016)	3.85	3.65	3.46	3.46
Road traffic accident rate reduced (in number of incidents per 100,000 population) - incidents of accidents	10.7 (2016)	10.00	10.00	10.00	10.00
Air Transport					
Air passenger movement increased (in number of passengers, cumulative)	71.54M (2016)	29.42M	32.65M	38.33M	38.33M
Cargo shipped via air increased (international and domestic) (in metric tons [MT], cumulative)	285.86M (2016)	165.54M	277.92M	328.93M	328.93M
Water Transport					
Passengers transported by sea increased (in number of passengers, cumulative)	89.16M (2016)	90.11M	91.66M	93.27M	93.27M
Cargo shipped increased (international and domestic) (in MT, cumulative)	302.68M (2016)	317.92M	325.12M	332.06M	332.06M
Number of vehicles carried by RORO vessels increased	5.50M (2016)	6.70M	6.77M	6.84M	6.84M
Rail Transport					
Passenger trips via rail in Metro Manila increased (in % share to total passenger trips via rail, cumulative)	11 (2014)	16	17	19	19
Energy/Power					
Power requirements met (in % available capacity over peak demand)	144 (2016)	148	147	139	139
Luzon	140 (2016)	143	144	137	137
Visayas	149 (2016)	150	146	137	137
Mindanao	162 (2016)	172	161	150	150
Energy intensity (primary energy) reduced (in tons of oil equivalent per million peso)	6.71 (2016)	5.82	5.66	5.56	5.56
Energy intensity (electricity consumption) reduced (in kWh per million peso)	11.18 (2016)	10.23	10.83	10.84	10.84

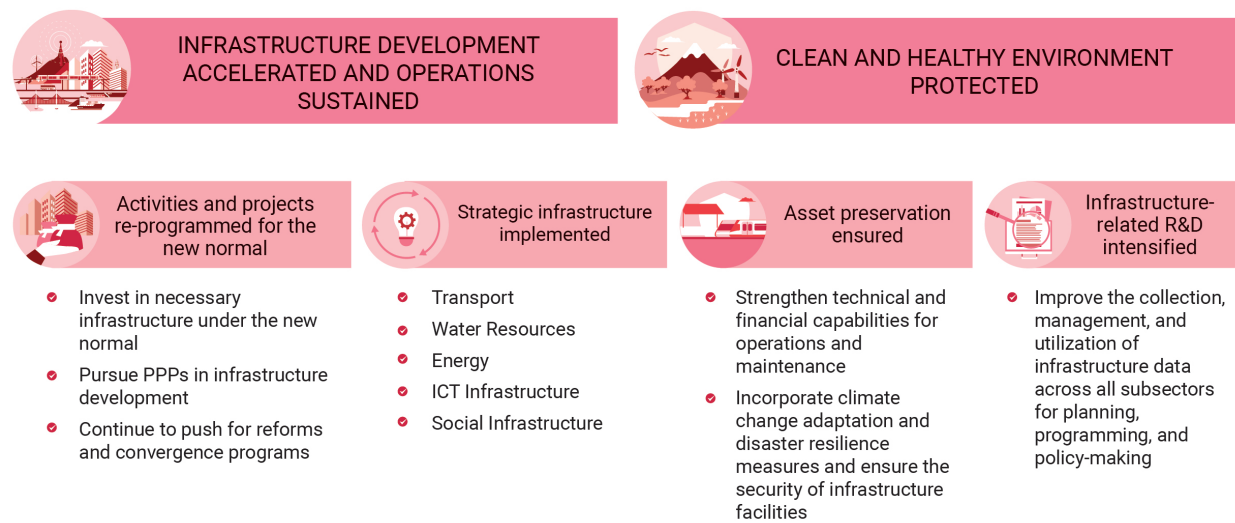
INDICATOR	BASELINE VALUE (YEAR)	TARGETS			
		2020	2021	2022	END OF PLAN
Proportion of households (HHs) with electricity to total number of HHs increased (in %, cumulative)	90.70 (2016)	96	98	100	100
Electricity consumption per capita increased (kWh per capita)	879.46 (2016)	1,043.52	1,095.91	1,163.54	1,163.54
Water Resources					
Water Supply and Sanitation					
Proportion of HHs with access to safe water supply to total number of HHs increased (in %, cumulative)	87.60 (2016)	93.11	94.49	95.87	95.87
Proportion of cities/municipalities served by water districts with 24/7 water supply increased (in %, cumulative)	84.00 (2016)	86.00	88.00	90.00	90.00
Proportion of HHs with access to improved sanitation to total number of HHs increased (in %, cumulative)	91.90 (2016)	94.60	95.28	95.95	95.95
Irrigation					
Cropping intensity increased (in %, cumulative)	143.00 (2016)	164.37	165.50	166.36	166.36
Ratio of actual irrigated area to the total potential irrigable area increased (in %, cumulative)	59.32 (2016)	63.10	65.33	66.73	66.73
Flood Management					
Ratio of flood-protected areas to the total flood-susceptible areas increased (in %, cumulative)	TBD	TBD	TBD	TBD	TBD
Information and Communications Technology					
Average broadband download speed increased (in Mbps)	4.30 (2016)	25.00	30.00	35.00	35.00
Social Infrastructure					
Health					
Proportion of barangays with barangay health stations, rural health units, or urban health centers to the total number of barangays (42,036 as of 2016) increased (in %, cumulative)	70.64 (2017)			72.18	72.18
Solid Waste Management					
Number of barangays served by materials recovery facilities	13,149 (2016)	21,018	23,119	25,221	25,221
Number of local government units (LGU) served by sanitary landfills (1,634 LGUs)	248 (2016)	434	456	479	479

Strategic Framework

Infrastructure development is an important bedrock strategy that contributes to enhancing the social fabric, reducing inequality, and increasing the country's growth potential, enabling all other development strategies to work effectively. The aspiration of a healthy and resilient Philippines entails envisioning the country's strategic infrastructure development post-pandemic with

the BBB Program as a major growth lever to hasten the country's recovery and provide a more solid foundation for resiliency. The outcomes and major strategies for the rest of the Plan period were carefully revisited and updated to better facilitate the transition and adaptation to the new normal, propel economic activities, and lay the foundation for extended growth.

Figure 19.1 Strategic Framework to Accelerate Infrastructure Development



Strategies

With the continuous reopening of the domestic markets and gradual lifting of restrictions, the government will prioritize the continuous resumption of the BBB Program, which is envisaged as a key element in bringing the much-needed impetus to help the country emerge from the COVID-19 pandemic and bounce back to recovery. With this, the major strategies aimed at accelerating infrastructure development have been updated as: (a) re-program activities and projects for the new normal; (b) implement strategic infrastructure for various infrastructure

subsectors; (c) ensure asset preservation; and (d) intensify infrastructure-related research and development (R&D) on technologies, including monitoring and evaluation of critical outcome indicators.

Recognizing that resources are limited as the country deals with the COVID-19 pandemic, the government was constrained in the rollout and implementation of the infrastructure program in 2020. Nonetheless, the rollout of infrastructure projects is expected to bounce back in 2021 and

be a major driver of economic growth through job generation, among others. The government will thus continue to closely monitor progress and make adjustments on an annual basis or as necessary.

Project proponents or implementing agencies will also have to be mindful of the project planning and implementation phases such that mobilization of resources are properly timed. Important projects that form part of master plans and are expected to yield significant benefits in the long-term will still be pursued by starting pre-procurement activities, capacity-building, social preparation, coordination among agencies and local government units (LGUs), anticipating and resolving right of way problems and other regulatory issues, which are common and recurring causes of implementation delays. Addressing such issues will pave the way for smoother and faster implementation of projects in the future. Thus, while the pandemic may have slowed down and disrupted the implementation of projects, with the right policies, financial instruments, and our whole-of-government approach, the resumption of the BBB Program is intended to put the Philippines in a good position to drive its recovery and resiliency program.

Sustaining operations and accelerating infrastructure development

Re-programming activities and projects for the new normal

Invest in necessary infrastructure under the new normal. Accelerating infrastructure development has gained increased urgency and relevance as a result of the COVID-19 pandemic. To rise from the economic downturn and build lasting gains, the government will need to stimulate optimism and confidence in the general economy and investing in the necessary infrastructure under the normal is a crucial strategy to support recovery by creating stimulus for economic growth through employment opportunities and aiming for renewed investor appetite and confidence.

The government has an ambitious infrastructure development program in place that has undergone review and reprioritization. As the country continues to address the COVID-19 pandemic, the government has prioritized development interventions that will have the most impact on the economy, guided by recovery and resiliency measures. This initiative involved assessing the available fiscal space for the infrastructure sector due to the pandemic, firming up budgetary requirements, and adjusting carefully the infrastructure spending strategy such that additional fiscal space for pressing health and social recovery programs may be better supported.

Thus, the government has carefully revisited the BBB Program and the Infrastructure Flagship Projects (IFPs) to take into account emerging priorities under the new normal and prioritize projects with high economic impact with due consideration for project readiness, implementation capacity of line agencies, job-generation potential, and interest and risk level of the private sector. Accelerating infrastructure investment is seen to drive economic and productive activities across industries towards creating employment opportunities to support direct and indirect jobs that, in turn, have multiplier effects that can help trigger and regain consumer spending and business confidence.

Besides infrastructure being crucial to support recovery, it is also a key strategy to strengthen the country's resilience given the changing global economic landscape and to be better positioned in dealing with future pandemics and their socioeconomic implications. Thus, the government recognizes that a shift in investment priorities under the new normal is necessary with greater focus on resiliency that can build a better foundation for lasting growth.

The shifts in focus in infrastructure investments involve development interventions in various infrastructure facilities and services that have gained imperative value and urgency in transitioning into the new normal and unleashing economic opportunities in a post-pandemic world. The changing patterns in the way people

work and do business provide an impetus for the government to fast-track its efforts in shifting into the digital economy and contactless society, which require enhancing the country's digital infrastructure and broadband internet. Additional investments will be pursued in affording new priorities for social infrastructure services under the new normal, particularly given the heightened importance of advancing our healthcare systems and the capacities of our healthcare facilities; to continue the delivery of quality education through blended learning and improvement of our education facilities; and to provide appropriate housing and resettlement in support of the *Balik Probinsya, Bagong Pag-asa* (BP2) Program. Access to safe and adequate water supply and sanitation will be given priority with ever increasing water demand and consumption, especially to help mitigate the spread of COVID-19 and other diseases through proper hygiene. The development and maintenance of irrigation facilities will also be necessary to support the food security goals of the country. Moreover, the electrification efforts will be accelerated, particularly in off-grid areas, to support the energy requirements under the digital economy and contribute to providing security and promoting lasting peace. With all these, continued investments in infrastructure come with exercising fiscal prudence and enhanced capacity to efficiently utilize the available resources.

Pursue PPPs in infrastructure development.

The private sector will play an important role in supplementing government efforts and augmenting public resources as the latter can mobilize the former's capital to fully or partially finance infrastructure projects and tap their efficiency and expertise in project delivery and management. Through PPPs, government resources may be freed up for urgently needed health and social recovery programs.

Along this line, the government will continue to enhance the regulatory framework for PPP to address various issues and challenges and fast-track the implementation of priority projects and programs. In this regard, the government intends to amend the NEDA JV Guidelines in the immediate term.

Continue to push for reforms and convergence programs. With less than three years remaining in the Plan period, convergence programs and inter-agency collaborations will be further intensified, such that the needed reforms that the government has initiated can be finally realized and implemented.

To smoothly carry out the BBB Program, the NEDA will work closely with the Department of Budget and Management (DBM) and other member agencies of the NEDA Board Committees to strengthen the alignment and synergy among planning, programming, and budgeting. Moreover, the government will continue to champion the timely movement and completion of priority programs, activities, and projects by identifying operational issues hampering project implementation under the new normal and aiming for the early resolution of bottlenecks. To minimize road disruptions in the rollout of infrastructure, the government (e.g., Department of Public Works and Highways [DWPH], Department of Transportation [DOTr], Department of Information and Communications Technology [DICT], among others) will form convergence programs and agreements for coordination of planning permission and civil works, and in the process, to also work towards transparency and better coordination with utility service providers.

Implementing strategic infrastructure

Public investment will be focused on transport, water resources, energy, information and communications technology (ICT), and social infrastructure, which are strategic and crucial in achieving development goals, especially in transitioning into the new normal.

Transport

The government will further enhance the efficiency of the transport sector to sustain economic growth and increase competitiveness by providing adequate, accessible, reliable, efficient, seamless, and safe movement of people and goods across the country, neighboring regions, and the world.

Enforce the NTP and strengthen it through legislation. Following the adoption of the policy by the NEDA Board, a law adopting it and creating independent regulatory bodies for the railways, airports, and seaports, among others, will establish a more streamlined transport sector that is able to efficiently and effectively carry out the identified development strategies.

Pending legislative action on the NTP, the NEDA Board Committee on Infrastructure (INFRACOM) and the Inter-Agency Technical Committee on Transport Planning will continuously ensure that the NTP and its IRR will be adhered to in planning, programming, implementing, operating, and maintaining transport projects and in operationalizing strategies and intended policy reforms.

In accordance with the principle of local autonomy, the LGUs will be made responsible for mobility outcomes in their jurisdictions. To this end, the DOTr and the DPWH will extend technical assistance to the LGUs in the field of transport planning, transport and land use integration, program and project implementation and monitoring, and traffic engineering and management. Consistent with the NTP, the closer engagement between national and regional transportation planning offices and LGUs will ensure that local mobility initiatives are guided by master plans and evidence-based studies from an overall network perspective, aligned with national and regional development plans, and based on financial and economic viability, comparative advantages, and linkages with other transport modes, which in turn will guide the rational development of an intermodal transport infrastructure network.

Relatedly, baseline transport data and information will have to be consolidated and a unified database and transport model will be maintained. At the local level, regional agencies of DOTr, DPWH, Land Transportation Office (LTO), and Land Transportation Franchising and Regulatory Board (LTFRB), together with the LGUs, will be responsible for collecting traffic flow data across different transport modes, which will be shared with the central transport database.

Adopt an integrated approach to transport planning, in line with the NTP and the National Spatial Strategy (NSS). The National transport agencies and the LGUs will implement an integrated approach to land use and transport planning in the provision of transport infrastructure and services. This approach aims to improve the capacity of transport facilities to adequately serve the demand for movement of passengers and goods to, from, and within the centers of socioeconomic activities identified in the NSS. The LGUs will be required to prepare local transport sector plans, such as the Local Public Transport Route Plan (LPTRP) as part of their Comprehensive Development Plans (CDP). The CDPs will be regularly updated to account for new and significant developments in land use and transport networks. Critical infrastructure in times of disasters, calamities, and future pandemics will be required in the Comprehensive Land Use Plans (CLUPs) of the LGUs.

Develop efficient and resilient national supply chain network system. Transport agencies will continue to formulate convergence programs with concerned agencies to ensure that economic sectors are provided with adequate transport infrastructure support and services. Agricultural areas will continue to be supported through the provision of farm-to-market and farm-to-mill roads, in accordance with the standards set for both design and construction. Transport infrastructure supporting tourist destinations will continuously be developed to boost tourism activities that were affected by the COVID-19 pandemic.

To support development in Mindanao, road projects under the Mindanao Logistics Infrastructure Network (MLIN) will be pursued along with the implementation of the Improving National Roads for Inclusive Growth in Mindanao Projects in Western Mindanao. The capacity of the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) road network will also be increased.

With an emphasis on improved connectivity and enhanced mobility, multimodal transport terminals complete with ancillary facilities will

be established to provide smooth transition for passengers and freight from one mode to another.

In terms of securing the backbone of transport planning activities in vulnerable areas, priority will be on the development and enhancement of critical transport infrastructure (i.e., transport facilities that are critical in ensuring continued economic activities during disaster operations and health crisis response) and mitigating pandemic impacts. These efforts will be complemented and supported by a resilient energy and communications infrastructure development. Critical transport infrastructure will be made climate- and pandemic- resilient to provide continuity in the movement of people and goods, contribute in containing the spread of contagion, and ensure last-mile operation for humanitarian logistics. Logistics estates and hubs will be developed at critical locations nationwide to support not only regional economic activities, but also humanitarian logistics in times of pandemics and disasters. Applicable standards and best practices on the adoption of resilient, efficient, and environment-friendly designs and technologies will be adopted.

Ensure the upkeep of existing infrastructure while expanding the transport network. To ensure that the transport sector is able to support economic development, the physical state of existing infrastructure will be maintained at a level that generates the optimal economic outcomes. This strategy will be coupled with the expansion of the transport network to reach the rest of the country and the world. Projects that are implemented, especially those identified as flagship projects, will be monitored closely to ensure the quality and timely delivery of output.

Ensure the universal accessibility of transport facilities. As part of the government's vision to improve the quality of life of the people through eased access, universal accessibility design and principles will be considered in the implementation of all transport infrastructure facilities and services to ensure an inclusive and people-oriented national transport system. The Task Force on Accessibility created in 2007

will be revived to develop initiatives that will address the unique needs of persons with disabilities, elderly, women, and children in terms of mobility within the transport network, particularly in public transport systems.

Land-based Transport

Prioritize mobility of people and goods over private vehicles by improving land-based transport network through engineering, enforcement, and education. The land-based transport network is slated for road widening and integration with mass-transit facilities through the implementation of multimodal transport terminals. For a more efficient use of road infrastructure, high-quality public transport modes will be pursued, such as public transport reform, fleet modernization, route rationalization, and environmentally-sustainable urban transport systems, among others, so that commuters will prefer public over private vehicles and more people can be moved with less road space, thereby addressing traffic congestion. In high passenger density corridors, high capacity mass transit systems such as rail will be prioritized over buses and jeepneys.

On the modernization of public transportation and in transitioning to the new normal, the DOTr and its attached agencies will adopt the Philippine Standard for Accessible Public Utility Vehicles formulated by the Department of Trade and Industry – Bureau of Philippine Standards (DTI-BPS).

Non-motorized transport (e.g., bicycle and pedestrian infrastructure) will be integrated into the existing network through retrofitting. The design of new projects will also consider features to encourage more walking and cycling trips. Standardized designs for bicycle and pedestrian infrastructure will be mainstreamed in projects of national transport agencies and LGUs. Existing and future transportation facilities will have infrastructure supporting non-motorized transport modes (e.g., bicycle racks, adequate pedestrian lighting) to promote multimodal mobility.

Appropriate traffic management measures will also be enforced and updated to be responsive to prevailing situations. Traffic engineering solutions, such as the use of intelligent transport systems (e.g., signalized intersections, advanced detection systems, incident detection), will be installed particularly in urban areas.

Anti-overloading measures, including penalties, will be strictly enforced and strengthened to prevent the rapid deterioration of roads. Additional weighbridges and portable weighing devices will be set up to broaden the scope of implementation. To ensure compliance with international standards on vehicle safety and environmental impact, the Motor Vehicle Type Approval System and Motor Vehicle Inspection System (MVIS) will be implemented.

Training of drivers and traffic enforcers will be continued to ensure that investments in transport facilities and other assets are preserved through proper use.

Sustain the expansion and enhancement of strategic corridors. Future developments will be pursued for the national road network with the planned implementation of the Philippine High Standard Highway Network Program Phase II, which will add about 1,044.6 kilometers (km) of high-standard national roads and expressways across metropolitan areas (884.7 km in Luzon, 73.8 km in Metro Cebu, and 86.1 km in Metro Davao). Toll expressways will be equipped with interoperable contactless toll collection systems for greater mobility and limiting person-to-person contact.

To complement the level of service being delivered by the national road network, local roads will continuously be improved by upgrading, expanding, and providing adequate maintenance. Road capacity should be optimized while maximizing the design speed in the road network. Innovative designs of intersections and interchanges will also be adopted and temporary bridges will be made permanent. Design standards that ensure the safety of users and resiliency of roads and bridges will be strictly enforced noting

the road network should remain functional for humanitarian logistics.

Decongest local and national transport corridors. On the matter of encroachment along transport corridors, the DILG, together with the Philippine National Police (PNP) and respective LGUs, will sustain directives for all concerned units to clear all roads of illegal structures and abandoned construction materials, and rehabilitate damaged road facilities. To complement the ongoing inventory of national roads by the DPWH and to establish a complete database and monitoring of the Philippine road network, LGUs will also be required to prepare an inventory of all roads within their jurisdiction as part of their geographic information system-based Local Roads Network Development Plan and their respective Local Public Transport Route Plans as part of their CLUPs.

Expand the rail network and other mass transit systems and ensure their accessibility, affordability, convenience, and reliability. The rail network will be expanded by developing new lines in high-density corridors, taking into consideration the plans for road-based transport infrastructure, especially in cases where projects will utilize the same right-of-way. Consistent with the objective of moving more people and cargos rather than vehicles, priority on the right-of-way will be accorded to rail-based transport over road-based transport.

Tourism, trade, and commerce will be supported through enhanced interconnectivity of passenger and freight railway transport development to generate opportunities for local area development, as well as expansion of local markets to promote productivity and trade competitiveness.

Noting the significance of railway in transit-oriented development strategies, the completion of planned interregional railway projects will be prioritized to facilitate greater interregional accessibility, linkages, and seamless multimodal transport network and to increase opportunities for economic activities. The establishment of rail-based connection to seaports, dry ports,

inland container depots, and airports will also be pursued for faster movement of freight and to decongest traffic along road networks to/from said terminals.

Transport network operators, both private and public, will continue to forge convergence undertakings to achieve integrated fare collection systems. Stored value cards or similar electronic media will be used to ensure maximum convenience for passengers and enable easy transfer between modes. While non-contact fare system is already being used in the Light Rail Transit (LRT)/the Metro Manila Rail Transit (MRT), migration from physical stored value cards to mobile, contactless payment will be expanded to other public transport modes to reduce the risk of spreading diseases, as part of health and safety protocol in the public transport sector.

Policies and guidelines on procurement activities in the railway sector will be customized to ensure the availability of highly-specialized spare parts and supplies.

To ensure that the quality of rail and mass transit systems are up to standards, capacities of skilled workers in mass transit systems, especially rail, will be upgraded. In view of the forecasted need for skilled workers manning the planned public mass transit projects, the Philippine Railway Training Center will continue to provide comprehensive technical training for train drivers and other rail professionals.

Air Transport

Improve the operational efficiency of airports and address constraints to optimal capacity utilization. All possible means to achieve operational efficiency and the optimal capacity utilization of airports will be explored. In particular, strategies will focus on decongesting air traffic serving the Greater Capital Region, such as building a new international airport, guided by an optimal airport strategy. In the interim, movements in both land and air facilities at the Ninoy Aquino International Airport (NAIA) will be optimized through procedural measures,

which involve airspace management and adoption of collaborative decision-making among the air traffic control, airlines, and ground handlers (e.g., by using ground movement radar and other technologies). Runway capacity will be optimized by cutting aircrafts' occupancy times. Development plans for the Clark International Airport (CRK) will be continued, including the establishment of a fast and direct access to Manila through a rail system providing non-stop and commuter services.

Implement an optimal airports system strategy to expand airport capacities at pace with growing demand. Existing provincial airports will be rehabilitated, while smaller or community airports will be upgraded to standard Principal Class 2 classification to cater to commercial flights for better connectivity with various tourist destinations. On the other hand, Aeronautical Lighting System and Instrument Landing System, can be installed in airports with appropriate facilities complying with the existing civil aviation regulations to enable night-time operations and improve accessibility, especially for those identified to readily accommodate said technology. The remaining regional airports will be assessed to determine night-landing viability. Appropriate design and operation measures will be identified to address limitations and achieve the goal of 100 percent coverage for all regional airports catering to commercial flights.

Facilities and equipment will be modernized (e.g., night-rating) in compliance with International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) standards, especially those that serve island provinces in Visayas and Mindanao. Security features/aspects should be integrated in the planning and design stages of development and/or rehabilitation of air transport facilities, to ensure allotment of sufficient space for security equipment (technology), processes (passenger and baggage throughput), and personnel (ergonomics). New investments will be made to service future destinations corresponding to the spatial and socioeconomic context and passenger demand.

Support the role of airports in spurring local tourism development and new growth centers.

To provide stimulus to local tourism development, especially in island provinces, tourism clusters identified by the Department of Tourism (DOT) will be served by a primary airport. Airport development in regional areas and island provinces will follow a hub-and-spoke model, where the gateway airport will connect to feeder airports providing access to areas of destination with natural and cultural tourism sites.

The role of airports as a catalyst for new growth centers and smart cities will be explored, taking off from the experience in CRK where demand growth complements and is reinforced by various ongoing mixed-use developments in Northern and Central Luzon (e.g., the New Clark City).

Strengthen and rationalize air transport regulations, policies, and protocols and modernize facilities to enhance air passenger experience. The private sector will play an important role in the operations and maintenance and future upgrading of airport facilities. Leveraging on its financial capacity, operational efficiency, and technological advantage, the private sector will be tapped to complement the government's resources in the initial development and construction of airport infrastructure to deliver an enhanced passenger experience. In view of these, regulatory functions of air transport agencies will be strengthened.

To reduce the impact of interruptions in airport operations during natural and human-induced disasters, existing intervention protocols between airlines and airport authorities will be reviewed. Equipment inventory will be modernized and airport training modules will be further enhanced. To ensure that passengers receive appropriate compensation or accommodation in case of flight cancellations pursuant to the Air Passengers Bill of Rights, more public assistance officers will also be deployed.

Consider environmental impacts of airport operations.

The Civil Aviation Authority of the Philippines (CAAP) and other airport authorities (e.g., Manila International Airport Authority [MIAA], Mactan-Cebu International Airport Authority [MCIA], etc.) will ensure that airports will be ready for the implementation of the Second Phase of Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).³ The Second Phase, which will be implemented from 2027 through 2035, will require the cooperation of airlines. As such, the groundwork on the necessary policy and infrastructure should be undertaken to ensure seamless implementation.

Maritime Transport

Improve port facilities to ensure that inter-island shipping, including a stronger roll-on/roll-off (RORO) network, will remain a viable option for transporting people and cargo.

Breakwater facilities will be constructed for wave protection in order to prevent ports from deteriorating. International standards will be followed in the expansion of port facilities. In addition, navigation channels to accommodate larger vessels will be installed to ensure the sustainability and efficiency of ports. These approaches will yield economic gains through lower transport cost, increased lifespan of products, and more profits and job opportunities, especially for fishing communities.

Sustain the optimal utilization of existing and additional port capacities.

The government commits to optimize the utilization of existing ports. Among the precursory measures for container ports are the development of a freight rail service between Clark and Subic, promotion of the use of inland container terminals, optimization of port container yard utilization, and integration of port management plans in the intermodal and multimodal approaches in the logistics network development. These efforts will be sustained with the implementation of additional plans, programs, and projects that

³ The CORSIA, an initiative of ICAO, will be implemented in three phases: pilot phase (2021-2023); followed by a first phase (2024-2026); and a second phase (2027-2035). Participation in the pilot phase and first phase is voluntary (until 2026), after which, more stringent requirements from the scheme would be mandated to all member states. The Philippines has voluntarily applied to take part in the CORSIA and has submitted an action plan to ICAO.

facilitate efficient flow of goods and services (e.g., dry ports, freight rail, and construction or expansion of regional ports).

The direct connection between Manila and Batangas Ports, through the Cavite Gateway Terminal, will be further enhanced, and co-loading (modified cabotage) will be promoted to encourage shipment between domestic ports. Existing dry ports will be improved and new ones will be built to provide support to manufacturers, importers, and exporters. Logistics hubs will be developed, where applicable, to connect industrial and manufacturing zones and agro-industrial areas to major port areas. Further, the capacity of the BIMP-EAGA Transit Transport Route in Mindanao will be improved to facilitate swift intra-EAGA transport.

Promote maritime transport as an alternative sustainable mode. Taking off from the initiatives on the revival of the Pasig Ferry System as a sustainable alternative to road-based transport, the government will develop the Coastal and Inland Waterways Transport System to further reduce urban traffic congestion and pollution, expand the intermodal transport network, increase regional connectivity, and create new business opportunities. The same system can also be utilized for disaster response, especially when road infrastructure in urban centers are damaged. Support for low-income LGUs and coastal and island communities in establishing their own seaports will be continued to promote local trade, tourism, livelihood, and disaster preparedness.

Implement the Maritime Industry Development Plan (MIDP). To accelerate the integrated and rational development of the country's maritime industry, eight priority programs, as well as other strategies espoused in the MIDP, have commenced implementation. These include the Nautical Highway Development Program, Maritime Tourism Program, and National Fishery Industry Development Program to improve the capacity, efficiency, safety, and security of shipping, as well as shipbuilding and ship repair services (SBSRs).

A global maritime hub for SBSRs and related ancillary businesses with a world-class research and training center in the country will be developed to bring together all maritime-related companies in one eco-maritime industrial park. This will provide comprehensive services to domestic and international passengers and crew, and cruise and cargo ships plying the Philippine waters for maintenance and other related services.

Safety and Security

Adopt a universally-accepted security structure to improve safety and security of the public transport system. An independent body will be created to investigate transport accidents and provide transport safety recommendations to minimize activities that may cause injury, death, loss, or damage to property. In the interim, the Office of Transportation Security (OTS) will continue to conduct compliance monitoring activities (CMAs), such as security audit, inspection, and test in public and private transport terminals to ensure that the security measures and procedures are implemented and in compliance with the standard presented in their respective security plans. Similarly, concerned agencies will ensure that projects are designed with appropriate safety standards. Advanced security systems for land-based terminals, airports, and seaports will be procured and installed. The Philippine Coast Guard (PCG) will continue its capability-building programs to ensure presence and control over the country's vast maritime domain. To ensure safety in marine navigation, the PCG will continue the installation of aids to navigation, such as buoyage systems, lighthouses, and other related facilities. New floating and air assets will be procured and a sufficient well-trained personnel complement will be provided. To serve the growing tourism and maritime industry, new bases or stations will be developed in strategic locations.

Strictly implement road safety measures. In modernizing traditional public utility vehicles and implementing new public mass transit systems, the following safety features will be incorporated: side entry/exits that can be easily

opened from either side, emergency exits, speed limiting technologies, dashboard camera, closed-circuit television, and global positioning system, among others. To reduce road crash incidents, street crossings for school zones and other public spaces along national roads should be replaced with pedestrian overpass/underpass, if applicable, and low-speed vehicles, such as tricycles and pedicabs, must be restricted in plying national highways. Other road safety laws and ordinances will be strictly implemented, including the use of dedicated bus lanes, motorcycle lanes, and loading/unloading areas; Land Transportation and Traffic Code (Republic Act [RA] 4136); Anti-Distracted Driving Act (RA 10913); Children's Safety on Motorcycles Act (RA 10666); and Road Speed Limiter Act (RA 10916).

Mainstream risk-based health protocols at the country's gateways. Considering that airports and ports are the country's gateways and frontline against the entry and transmission of pandemic diseases, there is a need to adopt operational measures that will minimize the risk of transmission at the terminals and onboard aircrafts and vessels or cruise ships. Health declaration forms of passengers will be administered and collected in electronic form and in advance prior to passenger departure. Procedures such as check-in, immigration, and boarding checks that can be conducted electronically will be automated and self-service options will be provided to minimize person-to-person contact. High-end temperature scanners and sanitation facilities in major international and domestic airports and ports will be set up and mandatory temperature screening will be imposed on inbound and outbound passengers. Passenger movement during boarding and disembarkation inside the cabin may be limited to smaller batches to maintain physical distancing. Additional cleaning and sanitization schedules by the crew before boarding and after disembarkation should be implemented.

Water Resources

Pursue water supply and sanitation (WSS) policies, plans, and programs in accordance with the key

reform agenda identified in the Philippine Water Supply and Sanitation Master Plan (PWSSMP). With the amplified importance of WSS during the COVID-19 pandemic and moving forward, the reform agenda will focus on the following areas, which are ultimately aimed at making water services adequately accessible for all: (a) establishing effective WSS sector institutions; (b) strengthening regulatory environment; (c) creating and ensuring effective WSS services; (d) balancing water supply and demand; (e) building climate resiliency; (f) enabling access to funding and financing; (g) managing data and information; and (h) driving R&D.

The creation of an apex body for water resources and the establishment of an independent economic regulatory body for WSS will remain as priority reforms in the sector. As envisioned, the apex body will be primarily responsible for the formulation and implementation of a comprehensive water development and management plan for the Philippines, in accordance with the principles of integrated water resources management (IWRM) and integrated coastal management. The independent water regulatory body, on the other hand, will harmonize regulatory practices, processes, and fees, among others, to facilitate and rationalize the expansion, improvement, and efficient provision of WSS services in the country. In the interim, the government will also continue to push for an executive issuance that will strengthen the National Water Resources Board (NWRB) to address fragmentation in the water sector and provide the overarching framework for an integrated and coordinated policy-making, planning, and implementation of programs and projects.

To ensure access to safe and adequate water to cope with the inevitable increase in water demand and consumption for the precautionary or mitigating measures for COVID-19 and other diseases, the government will fast-track the implementation and expansion of WSS infrastructure and services. As a complement, a water demand management program will likewise be implemented through: (a) conduct of intensive public education campaign on water demand management; (b) formulation

of policies and strategies for efficient water supply system; and (c) conduct of researches on water storage and collection systems.

Pursue initiatives on attaining water security.

Increase in water demand arising from an expected rise in individual hygiene practices and disinfection of public spaces due to COVID-19, as well as rising support to urban/community farming practices, would call for new water sources to ensure that demand is met, especially in areas suffering from water scarcity. Thus, the government will continue to support the development of new water sources and prioritization of surface water development, where feasible. Groundwater recharge system in the development of the surface water source for critical areas will be incorporated, wherever possible, in accordance with prescribed standards. Measures on efficient water utilization and conservation, as well as the use of eco-efficient water infrastructure such as, but not limited to, rainwater harvesting, water reuse, proper agricultural and agronomic planning for irrigation, and other emerging technologies on WSS will continue to be promoted to avert water shortage.

With the reactivation and reconstitution of the *El Niño* Task Force⁴ pursuant to Memorandum Order No. 38, s. 2019, the NEDA, as overall head, will revise and update the Roadmap for Addressing the Impacts of *El Niño*. The NEDA will also facilitate action on the pertinent recommendations emanating from the National Roadmap for Water Security currently being prepared by the NWRB. Said roadmap will incorporate the possible impacts of future epidemics, pandemics, and climate change or variability to address the impending water crisis.

Adopt a common/unified framework for resource allocation for WSS and review the National Sewerage and Septage Management Program (NSSMP) to accelerate the provision of WSS services. Under the common/unified framework for resource allocation, the NG will ensure the availability

of the required budget allocation for WSS projects across the country, which will include funding for project preparation, development activities, and capacity-building interventions on the operation and maintenance of facilities. Likewise, in accordance with the Clean Water Act (RA 9275), sewerage and septage management projects will be implemented. Given this, the government will explore the expansion or restructuring of the NSSMP, in line with principles of the common/unified framework for resource allocation for WSS to accommodate more beneficiaries other than sewerage or septage management systems in highly-urbanized cities and first-class cities or municipalities. Such expansion and restructuring of the NSSMP may include the review and restructuring of the cost-sharing scheme with the LGUs on the basis of absorptive capacities and performance, as well as technical assistance and revision of cost-sharing schemes in the preparation of feasibility studies.

Optimize funds for irrigation development and strengthen technical capacities for the development and maintenance of irrigation facilities guided by the National Irrigation Master Plan (NIMP). Water allocation for irrigation will have to be managed efficiently to offset the imminent increase in domestic or municipal water consumption to combat COVID-19. With the passage of the Free Irrigation Service Act (RA 10969) in 2018, funds for the restoration and rehabilitation of irrigation infrastructure and facilities will be optimized in accordance with the recommendations of the NIMP, which is currently being finalized, to ensure food security amidst the pandemic. Specifically, the government will shift its focus in the short term towards funding the operation and maintenance, rehabilitation, and/or restoration of existing irrigation systems across the regions, instead of funding for the construction of multi-year large irrigation systems.

Other developments in the agricultural sector, such as Rice Competitiveness Enhancement

⁴ Created pursuant to Executive Order No. 16, s. 2001.

Fund (RCEF) and support for diversified, non-traditional, and high-value crop farming, will also be taken into consideration in setting the direction for the irrigation sector under the said master plan. Likewise, to ensure effective and sustainable operations and maintenance of irrigation facilities, there will be capacity-building activities to improve the technical skills and workforce of LGUs, National Irrigation Administration (NIA), Department of Agriculture (DA)-Regional Field Offices, Bureau of Soils and Water Management (BSWM), Irrigators' Associations, and Small Water Irrigation System Associations.

Improve coordination between flood management efforts and undertakings in other sectors. Pending the creation of an apex body for the water sector, the DPWH, as the de facto lead agency for flood control and management, and other relevant agencies will intensify coordination between flood management efforts and undertakings in other sectors, such as solid waste management, reforestation, and housing, among others, under the general framework of the IWRM and river basin and land-use planning. Likewise, a paradigm shift from looking at floodwaters as “disaster to be prevented” into a “resource to be managed” is a necessary step in attaining the objectives of the IWRM framework. In this regard, storage of excess floodwaters will be prioritized in the context of water conservation and efficiency measures; flood management infrastructure that will also serve as potential source for domestic water supply, irrigation, and/or hydropower generation, among other possible uses, will be implemented, where feasible. Meanwhile, in anticipation of the completion of flood control master plans and studies for the major river basins, timely financial support for the full implementation and maintenance of flood management and mitigation measures under said master plans will be provided through the inclusion of the priority projects in the investment program of the national government (NG). Under the proposed creation of

an apex body for the water sector, a comprehensive database of all water-related data including flood-related information, will be established and regularly updated.

Energy

Integrate and enhance the energy plans. The Philippine Energy Plan (PEP) will be enhanced by adding a spatial dimension that informs investors on where to invest their energy projects. The PEP will integrate the inventory of traditional and renewable upstream resources with the downstream and the Power Development Plan. Renewable energy (RE) zones will continue to be identified and developed to facilitate connection to the transmission and distribution facilities. Other fuel resources and existing logistical facilities will be supplied to encourage the investments that will improve the operations of the energy service and goods providers.

Implement policy reforms to promote competition and encourage investment in the energy sector. The Department of Energy (DOE) continues to pursue the policy reforms under the Electric Power Industry Reform Act (EPIRA) of 2001 (RA 9136) and the Renewable Energy Act of 2008 (RA 9513). Policy issuances will be implemented to enhance the consumers' power of choice (i.e., Amended Policy on the Retail Competition and Open Access and the Green Energy Option), the reduction of costs (i.e., abolition of the Universal Charges – Missionary Electrification for new contracts and the Uniform Billing Policy), and the enhancement of benefits of host communities of power generation facilities and energy resource developers.

As an enabling mechanism for host communities to respond to the ongoing COVID-19 pandemic, the DOE Department Circular (DC) 2020-04-0008⁵ issued on April 6, 2020, authorizing host LGUs to utilize the Energy Regulation (ER) 1-94 Funds for COVID-19 related response mechanisms.

⁵ DOE, DC 2020-04-0008-0, Rationalizing the Utilization of ER 1-94 Fund by Host LGUs in Response to COVID-19 Public Health Emergency, April 6, 2020.

The strengthened Competitive Selection Process (CSP) in securing power supply contracts of all distribution utilities' (DU) procurement of power supply agreements for their captive market will also be sustained. Implementation of the CSP has already resulted in the reduction of generation rates for the Manila Electric Company, which covers around 50 percent of the consumers.

The full commercialization of the Wholesale Electricity Spot Market (WESM) in Mindanao will be pursued to provide a competitive market for buying and selling of electricity that is not covered by bilateral contracts, and at the same time, promote efficiency in the scheduling and dispatch of generation capacities in the region. Meanwhile, new market features and enhancements to systems and procedures will be introduced to improve the existing WESM in Luzon and Visayas, including the transition into the five-minute WESM replacing the current one-hour trading interval. The WESM in Mindanao and the enhanced WESM in Luzon and Visayas are expected to operationalize once the ERC approves the price determination methodology (PDM) adopting the five-minute dispatch interval and certification of market readiness (for Mindanao).

Under the context of economic recovery and spurring growth, more choices and more affordable electricity are crucial for industrial, commercial, and residential customers. To encourage the entry of more power generation investors, the government enacted the Energy Virtual One-Stop Shop (EVOSS) Act (RA 11234), Executive Order (EO) No. 30, s. 2017, and the LGU Energy Code (DOE-DILG Joint Memorandum Circular 01-2020), which streamline the permitting processes for energy projects. Phase 1 of the enhanced EVOSS system is targeted to be carried out by end of third quarter of 2020 in an effort to promote faster and simplified permitting process of power projects. This will involve online submissions of all the needed applications, documentary requirements, and online payment for charges and fees. Moreover, the EVOSS will consider the

expansion of its coverage to all the other non-power energy projects, which will also be implemented in phases.

To meet the increasing energy demand, the DOE will continue to explore the development of all the available energy resources, including nuclear energy option. The National Smart Grid Policy Framework and Roadmap for distribution utilities (DOE DC 2020-02-0003) will likewise be implemented. Smart grid uses innovative technologies to modernize electric infrastructure towards empowering consumers, ensuring energy supply flexibility and security, improving electric grid performance and asset utilization, and protecting the environment (e.g., through the use of smart meters).

Further, the privatization of power plant assets, which include the capacity of government-owned generating plants and contracted capacity of independent power producer (IPP) contracts, will be accelerated. To ensure the success of asset privatization, the Power Sector Assets and Liabilities Management (PSALM) Corporation will engage third-party advisors to conduct an extensive study that will serve as basis for formulating options and structures for the privatization of IPP-contracted capacity and real estate assets. Options include the sale through public bidding of the power plant, together with the underlying land owned by the PSALM or the government. The PSALM will also streamline and simplify bidding procedures to attract more bidders. Further, it will observe protocols and make use of applicable virtual and blended platforms in the privatization or disposal process to ensure that public bidding schedules will push through under the new normal.

As structural reliability is important in the new normal, major hydroelectric power plants under government ownership will be rehabilitated and uprated. Electricity generated from undisposed power assets throughout the country will continue to be provided to distribution utilities and other power customers at regulated rates.

Expedite the implementation of remaining policy mechanisms under the Renewable Energy Act of 2008 (RA 9513) to further encourage RE development in the country. Policy issuances on the Renewable Portfolio Standards and the Green Energy Option will be implemented to require mandated electric power industry participants to source a certain percentage of their power mix from eligible RE sources such as biomass, geothermal, solar hydropower, ocean, and wind. Establishment of the RE market will facilitate the trading of RE Certificates. To strengthen R&D in the RE sector, affiliated RE Centers will continue to be established.

The water-energy-food nexus will be incorporated in the design and facilitation of all the energy projects to conserve water, ensure energy security, and maximize food production. Instead of competing with the water and food sectors, complementation will be targeted through the introduction of RE and energy storage technologies in farming and crop processing methods and machineries, such as, but not limited to, pump or drip irrigation, rice hulling, and milling.

Moreover, the use of RE systems in the health and education sectors is being considered, such as the use of off-grid powered health and educational facilities using RE and energy storage systems.

In implementing the net metering policy,⁶ the government will review the current pricing methodology and financing mechanisms that will help in the adoption of PhotoVoltaic (PV) in the country. The DOE will continue to conduct policy studies to accelerate the positioning of RE in the country.

In line with the thrust of promoting more robust regional and local development, creating livelihood opportunities, and promoting inclusive growth, the Electric Cooperative-owned Distributed Generation Facility Program will be implemented. This program will develop distribution generation facilities using various

RE sources to be owned by the 121 electric cooperatives. In support of the BP2 Program, it will provide additional power sources that can stimulate investors to relocate investments and cater to the requirements of the people in the provinces.

Continue to develop transmission and distribution facilities, and projects that will transmit electricity efficiently to various load centers and interconnect the entire grid and other areas. The country's power transmission network will be unified to allow flexibility in the power grid system. Under the One Grid Philippines, the three major grids will be able to share excess supply. This program optimizes the use of available energy resources and additional generation capacities. To further improve the delivery of power services, the government will harmonize the Power Development Plan by integrating the Transmission Development Plan, Distribution Development Plan, and the Missionary Electrification Development Plan with the corresponding RE targets under the National Renewable Energy Program. It will also support the development of the Philippine Smart Grid. The National Transmission Corporation, its concessionaire, the National Grid Corporation of the Philippines (NGCP), and the DUs will coordinate with concerned agencies (e.g., DPWH) to explore the possibility of including the future installation of power transmission or distribution lines to connect island grids and other areas in the design of proposed inter-island bridges.

Ensure timely implementation of electrification programs, especially for remaining unelectrified off-grid islands, geographically-isolated and depressed areas, and last-mile communities. The DOE is closely monitoring the implementation of the three major forms of electrification programs — household electrification, grid electrification, and off-grid electrification — with the aim of fast-tracking the programs to achieve total household electrification by 2022. These are especially critical in supporting regional development

⁶ Net-metering is a consumer-based renewable energy incentive scheme that allows consumers to produce their own power generation using eligible renewable energy facilities and to deliver excess electricity supply back to the electric grid to offset their electricity consumption at 100 kW maximum.

under the new normal, where the need for physical movement to the biggest economic areas in the country would be tempered by the practicality of online connectivity and productivity.

As part of the electrification strategies under the Household and Grid Electrification Programs, house-wiring subsidy will be provided for unenergized households in areas with distribution facilities through the DOE's Nationwide Intensification of Household Electrification. Distribution line facilities will also be extended to unserved areas through the National Electrification Administration's (NEA) Expanded *Sitio* Electrification Program, Barangay Line Enhancement Program, and Expanded Household Electrification Program.

Under the Off-grid Electrification Program, individual PV Solar Home Systems will be installed by DUs via the DOE's Access to Sustainable Energy Program's PV Mainstreaming Program. In addition, the entry of the private sector in the Mini/Micro-Grid System will be allowed and encouraged through Qualified Third Party (QTP) schemes, JVs, and the National Power Corporation Small Power Utilities Group (NAPOCOR-SPUG) Mini-Grid Scheme. Further, RE-diesel hybrid power systems will also be developed to provide reliable electricity services at more affordable rates in off-grid areas.

To facilitate private sector participation in the achievement of the total electrification target of the government, existing guidelines on the participation of QTPs will be further streamlined and enhanced.

Promote the utilization of alternative fuels and new advanced energy technologies to diversify the country's energy resources and mitigate the adverse impact of energy use on the environment. The Alternative Fuel Roadmap will be implemented to promote a technology-responsive energy sector. For one, electric vehicles, where viable, will be supported to reduce dependence on conventional fuels. This involves the development of policy guidelines and regulatory framework for Electric Vehicle

Charging Stations, as well as the development of Minimum Energy Performance for Electric Vehicle Charging Stations.

Implement the Energy Efficiency and Conservation (EE&C) Act (RA 11285) and the Energy Efficiency and Conservation Roadmap. In April 2019, the EE&C Law was enacted to institutionalize energy efficiency and conservation as a national way of life for energy consumers. The law promotes the efficient and judicious utilization of energy and advocates the use of RE technologies.

In line with this initiative, the government will take the lead through the Government Energy Management Program (GEMP) involving efficiency and conservation measures in the government's use of electricity and fuel.

To help the LGUs reduce their energy consumption, the law also requires the development of local energy efficiency and conservation plans for incorporation in the local development plans. With the law in place, additional power supply for the country will come not just from new power plants, but also from energy savings as a result of EE&C measures.

Encourage investments in the upstream energy sector. To renew investor confidence in the Philippine upstream energy sector, the DOE will continue to promote the Philippine Conventional Energy Contracting Program, which offers 14 pre-determined areas for upstream development, with an option for investors to nominate their own prospective exploration area.

Pursue the development of the natural gas industry. The development of the natural gas industry will provide an additional alternative for consumers. The Philippine Downstream Natural Gas Regulation sets the policy direction and guidance for interested investors on the construction of natural gas facilities such as import receiving and regasification terminals, network of transmission, and distribution pipelines, under a regime of fair competition.

Pursue the establishment of a strategic petroleum reserve. A strategic petroleum reserve will shield consumers from volatile international oil prices and secure the country's petroleum requirement. In the short to medium term, the project envisions to cover the immediate importation of oil products and the construction of additional oil storage facilities and small-scale refinery. This will serve the dual purpose of generating profit for the government and augmenting the production and supply of refined petroleum products in response to the rising conflicts in oil-producing countries.

Adoption of the Energy Resiliency Policy. The government will institutionalize the development, promotion, and implementation of a Comprehensive Resiliency Plan (CRP), as well as incorporation of mitigation improvements into the reconstruction and rehabilitation of damaged infrastructures in accordance with the Build Back Better principles. This measure will be facilitated through the DOE DC 2018-01-0001 on the "Adoption of Energy Resiliency in the Planning and Programming of the Energy Sector to Mitigate Potential Impacts of Disasters", that was signed in 2018 to ensure an energy system that is resilient from risks and vulnerabilities from both natural and human-induced hazards.

ICT Infrastructure

With the aim of transitioning into the digital economy, the digital connectivity agenda, mainly driven by the government, will be of utmost importance under the new normal. Digital infrastructure will need to be provided to address the digital divide that has been heightened due to the pandemic. Policy reforms will also be introduced to facilitate digital transformation.

Fast-track the government's digital connectivity program. Investments in digital infrastructure will need to be reviewed to support current demand for broadband internet access to enable telecommuting (work-from-home set-up), distance learning, telehealth, business for micro, small, and medium enterprises, online financial services, and as support to the BP2 Program.

The digital connectivity program, which encompasses the National Broadband Program and the Free WiFi in Public Places Program, will be prioritized and fast-tracked to accelerate the deployment of the needed digital infrastructure that can serve the government, businesses and industries, and the public, especially those in the countryside. The program embodies the government's efforts in enhancing internet accessibility to bridge the growing digital divide. The physical infrastructure that will interconnect government offices via the Government Network (GovNet) can facilitate communication, address data gaps in various infrastructure subsectors, and allow better sharing and collaboration of different units of the government for coherence of initiatives. This aims to enable more LGUs to offer ICT-enabled government services to the public. Alongside this are cyber resiliency and security measures for the protection of government data and infrastructure.

Towards building our digital society and digital workforce, the broadband connection will also be provided to public segments of the country including public hospitals, rural health units, public schools, state universities and colleges, and other public places. This will support digital education, distance learning, and telemedicine towards developing an ICT-based knowledge base and extending social services to far-flung or last-mile areas. Under the new normal, the government will prioritize the provision of free WiFi in other public places, including community quarantine sites, plazas, transport terminals, airports, and seaports, among others.

Pursue ICT policy reforms to support the digital connectivity agenda. To complement the program initiatives, the government will need to pursue the necessary policy reforms and interventions in the ICT sector.

- The open access policy removes barriers to the entry of multiple, competing, and independent players in various layers of the broadband network. It aims to provide access to the facilities of existing national backbone network operators under terms that are non-discriminatory and transparent.

- Streamlining and harmonizing broadband-related permits, fees, and processes will hasten the rollout of broadband infrastructure. Permitting processes, fees, and requirements across national government agencies (NGAs) and LGUs need to be reduced, simplified, and harmonized to encourage players to enter the market. The LGUs may also establish online one-stop-shops for these purposes.
- Infrastructure sharing encourages the shared use of passive ICT infrastructure to reduce the associated costs in the broadband rollout. This will also expand wireless network coverage and enhance the quality of ICT services across the country, including in underserved and unserved areas.

Social Infrastructure

Social infrastructure is fundamental in the provision of adequate basic social services to achieve the human capital development objectives of the country. The implementation of social infrastructure projects will have to be ramped up to make up for the slow progress in the first three years of the Plan implementation.

Importantly, in line with the whole-of-government approach, the LGUs must also be able to step up in the provision of devolved social services, including education, health, and sanitation.

Education

The Department of Education (DepEd), in coordination with the DPWH, will endeavor to complete, by 2022, all programmed school projects under the Basic Educational Facilities Fund which have been abandoned or unfinished since 2014. Furthermore, to enhance its School Building Program, the DepEd has included the following strategies in its Public School of the Future for implementation in School Year (SY) 2020-2021:

Prioritize alternative learning platforms for formal education. Amidst the COVID-19 pandemic, education systems have largely shifted

away from traditional “face-to-face” forms of educational instruction. In this regard, the DepEd has adopted the blended learning system starting SY 2021-2022, which includes online distance learning, television and radio-based instruction, and distribution of printed learning modules to students, to ensure that quality learning opportunities are made available to public school students. Toward this end, universal access to reliable and affordable internet connection for the education sector will be prioritized. In addition, the DepEd may consider providing its faculty and students access to necessary ICT equipment (both hardware and software) to enable them to access virtual classes and other online learning modules. Given the foregoing, cooperation among concerned NGAs and LGUs should be ensured for the successful implementation of the blended learning program.

Efforts to address backlogs in the provision of education facilities will resume. As the country recovers from the pandemic and attendance to physical classes are then deemed safe for resumption, the DepEd, in coordination with the DPWH, will continue to address its current backlog in education infrastructure, especially in geographically isolated and conflict-affected areas. With the required physical distancing measures under the new normal, the DepEd may need to revisit its existing design standards and minimum specifications for education facilities (e.g., classroom size and class size). Nevertheless, the following facilities will need to be continuously provided or made accessible to public schools:

- Clean and potable water supply, comfort rooms, wash, and other sanitation facilities;
- Electrification that considers utilization of renewable energy sources—off-grid schools may be equipped with alternative sources of renewable energy through installation of solar panels, among others;
- Clinics that will also serve as multi-service hubs catering to the various health, nutrition, and medical needs of learners; and

- Efficient disaster response through a streamlined warehouse scheme for storage and inventory of supplies and for easier deployment and delivery of materials and equipment, such as temporary learning spaces or classroom tents, to replace those damaged by calamities.

Further, the DepEd will facilitate convergence initiatives with the DPWH, the Department of Health (DOH), the Department of Social Welfare and Development (DSWD), and other agencies in all governance levels, including the LGUs, to address the broader needs of the education sector.

Health

Sustain strategic implementation of health facilities. With the strain on the capacities of health facilities brought about by medical crises such as the COVID-19 pandemic as well as the expected increase in demand for health services post-pandemic, it is imperative for the NG to continue to invest in health service improvement. Construction of health infrastructure facilities that are energy-efficient, disaster-resilient (e.g., hospitals and healthcare facilities, including testing facilities, quarantine, and isolation facilities) and responsive to health and medical needs that have recently emerged with the pandemic will have to be prioritized, in accordance with the existing standards to prepare and ensure the sufficiency of the country's health infrastructures, not only during the path to recovery from COVID-19 but more so in case of any similar occurrence in the future. The DOH will conduct a comprehensive needs assessment of critical health facilities involved in service delivery networks, especially with respect to those that are vital in dealing with COVID-19. The assessment will form part of the basis for determining which facilities will be constructed (especially in underserved areas), upgraded, or expanded under the Health Facilities Enhancement Program (HFEP).

Improve epidemiological and surveillance capacities for COVID-19 and other infectious diseases. In response to the pandemic and in preparation for the possible emergence of other

highly infectious diseases, there is a need to establish an integrated health data management system that tracks and links patient referrals and laboratory testing and monitors the supply of available equipment, medicines, and blood, among others. Further, there may be a need to construct and establish an operational Level 2 Biosafety laboratory with adequate number of test kits in every region.

Solid Waste Management

Enhance technical and financial capacities of LGUs in implementing solid waste management (SWM) initiatives in compliance with the Ecological SWM Act of 2020 (RA 9003). The Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB), together with the National Solid Waste Management Commission (NWSM), the DILG, and relevant stakeholders, will work towards enabling the LGUs to implement the following SWM strategies:

- Facilitate clustering or pooling of resources of LGUs for common SWM facilities and services for enhanced economies of scale;
- Explore innovative financing and improve access of LGUs to financing windows, such as those being provided by the government financing institutions and through PPP arrangements, to finance SWM programs;
- Adopt alternative technologies, including waste-to-energy, considering institutional, legal, and technical limits;
- Support knowledge management through increased investments in SWM-related innovation and R&D of appropriate technologies;
- Operationalize the National SWM Fund and study the re-institutionalization of the NG-LGU cost-sharing scheme for SWM; and
- Revisit the SWM Act of 2020 and make necessary amendments towards facilitating and expediting the provision of SWM facilities.

Protecting clean and healthy environment

Ensuring asset preservation

With emphasis on sustainability, safety, and resilience of infrastructure, asset management planning, and innovative maintenance strategies will be implemented to improve the infrastructure system's performance. The conduct of comprehensive vulnerability and risk assessment of critical infrastructure, particularly in areas considered as COVID-19 hotspots—including buildings that may serve as isolation or treatment facilities—is deemed urgent and significant.

Strengthen technical and financial capabilities for operations and maintenance. Training facilities will be established for the upgrading of the technical and managerial skills of the country's workforce and building their capacity to innovate. National and local level planning will be rationalized and processes will be streamlined to expedite program and project implementation. To optimize the use of funds for infrastructure development, value engineering, and value analysis techniques at different stages of project development will continue to be applied.

The country's regions will be developed through better rationalization of the budget allocation that takes into account the geographic location of infrastructure projects and programs. This effort will be guided by masterplans and roadmaps being formulated, maintained, and updated by pertinent agencies.

Incorporate climate change adaptation and disaster resilience measures and ensure the security of infrastructure facilities. Given the country's high vulnerability to disasters and the effects of climate change, disaster risk reduction and climate change adaptation strategies will be employed. The Energy Resiliency Policy, issued to institutionalize disaster resiliency efforts, aims to strengthen energy systems and facilities such that these can quickly restore power and provide alternative sources of energy in times

of emergency. To mitigate risks that threaten essential infrastructure services, there will be coordinated efforts to enhance the security of infrastructure facilities through the adoption of appropriate technologies (e.g., surveillance systems, satellite-based navigation systems, among others). Existing data infrastructure in the National Disaster Risk Reduction Management Operations Center will be upgraded. Joint exercises in disaster response protocols and engagement of stakeholders in disaster risk reduction and climate change adaptation will be conducted with the end view of meeting international sustainability standard rating systems for construction. Sustainability incentive programs will be promoted and the comprehensive and integrated strategic environmental assessment will be undertaken.

Intensifying infrastructure-related R&D

Recognizing that R&D can foster a more sustainable and efficient way of building infrastructure, the government will pursue R&D on renewable energy and technologies to meet the growing need for clean and affordable energy, cost-efficient technologies for the management of wastewater and solid, hazardous, and healthcare wastes to protect public health and the environment, new transportation technologies, climate change- and disaster- resilient infrastructure designs; and new methodologies for gathering and managing science-based data. In this regard, the establishment of R&D facilities will be supported.

Improve the collection, management, and utilization of infrastructure data across all subsectors for planning, programming, and policy-making. Updated, integrated, and comprehensive data for various subsectors of the infrastructure sectors will be made available to decision-makers to serve as basis in planning, programming, and policy-making. Towards this end, resources will be mobilized to identify vital data and statistics for the infrastructure sector, with the intent of establishing comprehensive databases based on available technological applications and platforms.

Legislative Agenda

The table below contains the various legislative agenda for the infrastructure sector.

Table 19.2. Legislative Agenda to Accelerate Infrastructure Development

LEGISLATIVE AGENDA	RATIONALE
Transport	
Enactment of the National Transport Policy (NTP)	<p>This aims to help achieve a safe, secure, efficient, competitive, dependable, integrated, environmentally sustainable, and people-oriented Philippine transportation system by setting forth policies that will serve as boundary conditions to guide all entities involved in the transportation sector in the exercise of their functions.</p> <p>This policy will provide the parameters for planning at the agency level, e.g., the formulation of the Philippine Transport System Master Plan.</p> <p>The NTP was adopted by the NEDA Board on September 12, 2017 and its IRR was approved by the INFRACOM on December 14, 2018.</p> <p>The proposed law is for filing/endorsement to the 18th Congress.</p>
Enactment of a law creating independent regulatory bodies for the railway and maritime transport sectors	<p>This will address the weak and fragmented institutional setup of concerned transport agencies by creating respective independent regulatory bodies for the railway sector and maritime transport sector that is consistent with the NTP. The existing dual roles of some agencies acting as both operator and regulator of transport facilities will be effectively eliminated.</p> <p>The bill is for the adoption of the NEDA Board and subsequent filing/endorsement to the 18th Congress.</p>
Enactment of a law creating an independent body for transport safety and security	<p>This seeks to place all transport safety and security matters under a single independent body that will, among others, investigate transport accidents and provide transport safety recommendations, thereby eliminating conflicting and overlapping functions of existing agencies or entities.</p> <p>Various Senate Bills (SB) and House Bills (HB) pertaining to the creation and establishment of a National Transportation Safety Board were filed in the 18th Congress.</p>
Enactment of a law institutionalizing the use of bicycles and other active and sustainable modes of transportation	<p>This aims to shift the role of bicycles and other forms of non-motorized and active transportation, from being an “alternative mode” towards an institutionalized mode of transport that is integrated in the transportation network of the country. This will be done by providing the necessary infrastructure and support services, establishing safety and design standards, and increasing public awareness on road safety and road sharing among motorists, cyclists, and pedestrians.</p> <p>Various SBs and HBs on the proposed measure were filed in the 18th Congress (SBs 66, 285, 319, 332, 948, and 1518, and HBs 1251, 1893, 2520, 4493, 5374, and 5435).</p>

LEGISLATIVE AGENDA	RATIONALE
Water Resources	
Enactment of a law creating an apex body for the water resources subsector; and independent economic or financial regulator for WSS	<p>The apex body will act as the lead agency to oversee/coordinate overall policy and project/program implementation to address the weak and fragmented institutional set-up of the water resources subsector.</p> <p>Meanwhile an independent economic regulator for the water supply and sanitation is envisioned to harmonize the regulatory practices, processes, fees, and standards on water supply and sanitation while addressing the overlapping functions or jurisdictions of existing regulatory entities.</p> <p>A substitute HB creating the Department of Water Resources (DWR) and the Water Regulatory Commission (WRC) was jointly approved by the HOR Committee on Government Reorganization and Committee on Public Works and Highways on November 12, 2019. Said HB was likewise approved by the House Committee on Appropriations on November 18, 2020.</p>
Energy	
Amendments to the Electric Power Industry Reform Act (RA 9136)	<p>The proposed amendments to the EPIRA aim to improve the implementation of the law's provisions and enhance its effectiveness to address high cost of electricity, alleged market collusion, and insufficient power supply.</p> <p>The following relative draft bills were filed in 18th Congress: HBs 466, 469, 2339, 2784, 3802, 7059 and 7341.</p>
Enactment of an enabling law for the natural gas industry	<p>This will provide an enabling legal and regulatory framework for the natural gas industry to guide investments in the sector.</p> <p>The bill has been filed in the 18th Congress as HB 3031.</p>
ICT	
Enactment of the Open Access in Data Transmission	<p>This measure aims to lower the barriers to entry and allow participation of more diverse set of providers to compete in the various segments of the data transmission industry.</p> <p>Open access is envisioned to pave the way for promoting physical infrastructure sharing among service providers and access network segments based on fair, reasonable, and nondiscriminatory terms.</p> <p>The bills have already been filed in the 18th Congress as HBs 57, 4109, and 5341 and are currently pending with the Committee on ICT.</p>
Social Infrastructure	
Amendments to the Ecological Solid Waste Management (SWM) Act (RA 9003)	<p>The proposed amendments aim to address the weak administrative, organizational, and institutional dynamics of LGUs in implementing SWM programs or projects.</p> <p>The proposed amendments, filed in the 18th Congress as HB 1598 and currently pending with the Committee on Ecology, include, among others, the mandatory creation of a local environment and natural resources offices and identification of dedicated focal SWM units with corresponding organization structure, powers, and functions.</p>