



Republic of the Philippines
DEPARTMENT OF ENERGY
(Kagawaran ng Enerhiya)

DEPARTMENT CIRCULAR NO. DC2023-01-0002

**ADOPTION OF THE NATIONAL ENERGY CONTINGENCY PLAN FOR
"THE BIG ONE"**

WHEREAS, Republic Act (R.A.) No. 7638, or the "*Department of Energy (DOE) Act of 1992*" declares it the policy of the State to ensure a continuous, adequate, and economic supply of energy with the end in view of ultimately achieving self-reliance in the country's energy requirements;

WHEREAS, Section 25 of R.A. No. 7638 provides that upon a declaration of critically low-energy supply or imminent danger thereof, the DOE Secretary shall be authorized to implement the fuel and energy allocation plan provided for in Section 12 (b)(5) of said Act, and to formulate and implement other measures for the conservation of energy including, but not limited to, power or fuel rationing, load curtailment, and restrictions on the use of government vehicles and resources;

WHEREAS, Section 37 of R.A. No. 9136, or the "*Electric Power Industry Reform Act (EPIRA) of 2001*" provides that in addition to its power and functions, the DOE is mandated to supervise the restructuring of the electricity industry, and in pursuit thereof, formulate policies for the planning and implementation of a comprehensive program for the efficient supply and economical use of energy consistent with the approved national economic plan and with the policies on environmental protection and conservation and maintenance of ecological balance and provide a mechanism for the integration, rationalization, and coordination of the various energy programs of the government;

WHEREAS, R.A. No. 8479, or the "*Downstream Oil Industry Deregulation Act of 1998*" declares it the policy of the State to liberalize and deregulate the downstream oil industry in order to ensure a truly competitive market under a regime of fair prices, adequate and continuous supply of environmentally clean and high-quality petroleum products;

WHEREAS, R.A. No. 10121 or the "*Philippine Disaster Risk Reduction and Management Act of 2010*", declares it the policy of the State, to institutionalize the policies, structures, coordination, mechanisms, and programs with continuing budget appropriation on disaster risk reduction from national down to local levels towards building a disaster-resilient nation and communities;

WHEREAS, based on the Metropolitan Manila Earthquake Impact Reduction Study (MMEIRS) conducted in 2004, the occurrence of a magnitude 7.2 earthquake generated from the 100-km long West Valley Fault (WVF) system or "The Big One" threatens Metro Manila and its nearby provinces which may lead to widespread destruction of properties, loss of lives and economic loss;

WHEREAS, recognizing that there is an urgent need to enhance the resiliency of the Greater Metro Manila Area (GMMA) being the seat of the national government and the main hub of the country's economic, financial, political and educational centers, Executive Order (E.O.) No. 52, s. 2018, titled "*Creating the Program Management Office for Earthquake Resiliency of the Greater Metro Manila Area*" was issued on 08 May 2018 adopting a "*Two-pronged Strategy Towards an Earthquake Resiliency GMMA*," consisting of immediate and long-term measures to reduce risks and vulnerabilities of communities and strengthen critical infrastructures;

WHEREAS, Section 2 (b) of EO No. 52, s. 2018, mandates the Program Management Office for Earthquake Resiliency of the Greater Metro Manila Area (PMO-ERG) created thereby, in collaboration with concerned departments, agencies, and offices of the government, including local government units (LGUs) and the private sector, to ensure the availability and adequacy of key lifelines that can be mobilized immediately after "The Big One" hits the GMMA;

WHEREAS, on 17 January 2018, DOE issued Department Circular (DC) No. DC2018-01-0001 titled "*Adoption of Energy Resiliency in the Planning and Programming of the Energy Sector to Mitigate Potential Impacts of Disasters*" promulgating the adoption and mainstreaming of resiliency programs in the planning, project implementation and operations of the energy sector and creating the Task Force on Energy Resiliency (TFER) to oversee the implementation of the Circular and is empowered with coordination, integration, supervision, monitoring and evaluation functions related to Energy Resiliency;

WHEREAS, Section 7.1.7 of DC No. DC2022-06-0028, titled "*Supplementing Department Circular No. DC2018-01-0001 on the Energy Resiliency Planning and Programming of the Energy Sector and on Task Force on Energy Resiliency (TFER) Functions and Structure to Mitigate Impacts of Disasters*", mandates the TFER to develop harmonized disaster preparedness and response plans, protocols, and manuals of operations of the energy sector to prepare, organize and respond effectively to disaster events and for the physical protection of energy infrastructures, and protection and preservation of life;

WHEREAS, there is a need for a harmonized energy contingency plan for a magnitude 7.2 earthquake, which includes response arrangements and measures among the energystakeholders and other concerned agencies aimed at the substantial reduction of disaster risks and vulnerabilities, and increase preparedness for response and recovery to provide immediate power and fuel services to other critical lifelines;

NOW, THEREFORE, for and in consideration of the foregoing premises, the DOE hereby promulgates the adoption of the National Energy Contingency Plan (NECP) for "The Big One" by the concerned energy sector stakeholders and participants in collaboration with other government and non-government agencies.

SECTION 1: SCOPE AND APPLICATION

This policy shall apply to all energy industry stakeholders and participants from the energy resource, renewable energy, power, oil, and energy utilization sectors that are directly affected and involved in the immediate response, restoration and recovery of power and oil facilities, supply, and services in the event of "The Big One".

SECTION 2: GENERAL POLICIES AND PRINCIPLES

The DOE and its energy sector stakeholders and participants shall adopt the following policies and guiding principles:

- 2.1 The NECP for "The Big One" shall be the official document to be adopted and implemented by all energy industry stakeholders and participants concerned in response to a magnitude 7.2 earthquake from the West Valley Fault (WVF) with at least PHIVOLCS Earthquake Intensity Scale (PEIS) VI (Very Strong) in GMMA;
- 2.2 Formulate and implement crucial disaster prevention and mitigation interventions and improvements aimed to reduce the risks and vulnerabilities, strengthen, and increase earthquake resiliency of energy infrastructure facilities based on the "Build Back Better" Principle, specifically those that will be directly impacted by "The Big One";
- 2.3 The response arrangements of the NECP for "The Big One" prioritize the preservation of life and properties crucial to the continuity of socio-economic, political, and institutional state and activities of the Philippines;
- 2.4 In the attainment of its response objectives and implementation of strategies and action plans, the NECP shall abide by the existing legal, ethical and safety procedures that are practicable during times of crises;
- 2.5 Formulate and implement the relevant policies, programs and action plans on disaster preparedness to ensure the smooth implementation of disaster response arrangements in relation to the NECP for "The Big One", to include the Preparedness Measures and Pre-arrangements stated in **Annex G** of the NECP for "The Big One"; and
- 2.6 Continue the development and implementation of plans and programs that aim to enhance the response arrangements, activities, and protocols of the energy sector for "The Big One".

SECTION 3: DEFINITION OF TERMS

- a) **Build Back Better** – refers to the use of the recovery, rehabilitation, and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment. (DOE DC2018-01-0001)
- b) **Business Continuity Plan (BCP)** – documented information that guides an organization to respond to a disruption and resume, recover, and restore the delivery of products and services consistent with its business continuity objectives. (ISO 22301:2019)

- c) **Contingency Plan** - a scenario-based plan for a specific and projected natural and/or human-induced hazard. It aims to address the impacts of the hazard to people, properties, and environment; and/or to prevent the occurrence of the emerging threats through the arrangement of timely, effective, appropriate, and well-coordinated responses as well as the efficient management of resources. (Contingency Planning Guidebook)
- d) **Critical Infrastructure** - refers to an asset or system, whether physical or virtual, that is essential to the maintenance of vital societal functions or to the delivery of essential public services that the incapacity or destruction of such systems and assets would have a debilitating impact on national defense and security, national economy, public health or safety, the administration of justice and other functions analogous thereto. It may include, but is not limited to, an asset or system affecting telecommunications, water and energy supply, emergency services, food security, fuel supply, banking and finance, transportation, radio and television, information systems and technology, chemical and nuclear sectors (R.A. No. 11479).
- e) **Disaster** – refers to a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. It is often described as a result of the combination of the exposure to a hazard. The conditions of vulnerability that are present: and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human, physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation.
- f) **Disaster Prevention** - refers to the outright avoidance of adverse impacts of hazards and related disasters. It expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance such as construction of dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high-risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake (R.A. No. 10121).
- g) **Disaster Mitigation** - refers to the lessening or limiting of the adverse impacts of hazards and related disasters. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness (R.A. No. 10121).
- h) **Disaster Preparedness** - refers to the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. Preparedness action is carried out within the context of disaster risk reduction and management with the aim of averting disaster. At the same time, preparedness aims to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response to sustained recovery. Preparedness is based on a sound analysis of disaster risk and good

linkages with early warning systems, and includes such activities as contingency planning, stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information, and associated training and field exercises. These must be supported by formal institutional, legal, and budgetary capacities (R.A. No. 10121).

- i) **Disaster Response** - refers to the provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. Disaster response is predominantly focused on immediate and short-term needs and is sometimes called "disaster relief" (R.A. No. 10121). Moreover, potential disaster losses in lives, health status, livelihood, assets and services, which could occur to a particular community or a society over some specified future time period (R.A. No. 10121).
- j) **Disaster Rehabilitation** - refers to measures that ensure the ability of affected communities and/or areas to restore their normal level of functioning by rebuilding livelihood and damaged infrastructure and increasing the communities' organizational capacity.
- k) **Disaster Recovery** - refers to the restoration and improvement where appropriate, of facilities, livelihood and living conditions of disasters-affected communities, including efforts to reduce disaster risk factors, in accordance with the principle of "Build Back Better". (UNISDR Terminology on Disaster Risk Reduction [2009])
- l) **Disaster Risk Finance** - defined as 'ex-ante' or 'pre-arranged' finance that is arranged in advance of a disaster, to cover the future costs of preparation, response, recovery and/or reconstruction. It could include insurance or catastrophe bonds but also budgetary instruments such as contingency budgets or contingent loans. (Center for Global Disaster Protection)
- m) **Disruptive events** – refers to any incidents (natural and/or man-made) that notably causes disarrangement to the normal operation of the energy sector.
- n) **Energy Sector** - refers to energy industry participants in the energy resource, renewable energy, power, oil, gas and energy utilization sectors, among others.
- o) **GeoRiskPH** - GeoRisk Philippines is a multi-agency initiative led by the Philippine Institute of Volcanology and Seismology (PHIVOLCS), funded by the Department of Science and Technology (DOST) and monitored by the Philippine Council for Industry, Energy, and Emerging Technology Research and Development (PCIEERD) from 2018 to 2020. It has been institutionalized in DOST-PHIVOLCS since 2021.
- p) **Hazard** – refers to a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.
- q) **Human-induced hazard** - refers to human-induced significant incidents resulting in acts of terrorism, destabilization, criminal activities, and disruption of normal day-to-day economic activities that require prompt intervention to

contain the incident, mitigate the effects, and normalize the situation. (National Disaster Response Plan)

- r) **Intensity** – refers to the strength of an earthquake as perceived and felt by people in a certain locality. It is a numerical rating based on the relative effects to people, objects, environment, and structures in the surrounding. In the Philippines, the intensity of an earthquake is determined using the PHIVOLCS Earthquake Intensity Scale (PEIS). (DOST-PHIVOLCS)
- s) **Magnitude** – refers to a measure of the energy release at the source of the earthquake. (DOST-PHIVOLCS)
- t) **Priority Action Plan (PAP)** – refers to an action plan with an outline or list of all the priority tasks that need to be completed to achieve a goal.
- u) **PHIVOLCS Earthquake Intensity Scale (PEIS)** – refers to a 10-point scale being used in the Philippines. This is used to assess the Intensity at a specific location. (DOST-PHIVOLCS)
- v) **Rapid Earthquake Damage Assessment System (REDAS)** – refers to a software developed by the PHIVOLCS in 2022 under a DOST Grant In Aids (DOST GIA) Project. The software can simulate earthquake hazards such as ground shaking, liquefaction, landslides and tsunamis. The software can also compute earthquake impacts in terms of physical damage, casualties, and economic loss. (DOST-PHIVOLCS)
- w) **Resiliency Compliance Plan (RCP)** – refers to the plan that in general, shall at a minimum contain adaptation measures, which include both structural and non-structural measures, to gauge infrastructure, systems, stockpiling, and human resource preparedness before, during and in the aftermath of disruptive events. Moreover, the RCP shall outline policies, plans and programs specific to the prevention and mitigation, preparedness, response, rehabilitation and recovery on disaster. (DC2018-01-0001)
- x) **The Big One** – refers to the worst-case earthquake scenario in a particular locality. As used herein, it refers to the destructive magnitude 6.5 - 7.2 earthquake with at least PEIS VI bound to happen in the Greater Metro Manila Area upon the movement of the WWF. (DOST-PHIVOLCS)

SECTION 4: CREATION AND MANDATE

- 4.1 **Creation of a Technical Working Group on Energy Sector Earthquake Resiliency.** A Technical Working Group (TWG) on Energy Sector Earthquake Resiliency (ESER) shall be created under the TFER and shall be composed of the following agencies/entities/units:
 - 4.1.1 DOE as the lead agency of the TWG-ESER. An Undersecretary/Assistant Secretary shall be assigned as the Chairperson of the TWG-ESER;
 - 4.1.2 The Chairperson shall assign a Vice Chairperson from DOE with a rank of at least a Director;
 - 4.1.3 The TWG-ESER shall be supported by a Technical Secretariat from the Energy Resiliency and Planning Unit of the DOE.

4.1.4 The following member agencies/entities/units shall assign a permanent and alternate member:

- 4.1.4.1 Electric Power Industry Management Bureau (EPIMB);
- 4.1.4.2 Oil Industry Management Bureau (OIMB);
- 4.1.4.3 Renewable Energy Management Bureau (REMB);
- 4.1.4.4 Energy Policy and Planning Bureau (EPPB);
- 4.1.4.5 Administrative Services (AS);
- 4.1.4.6 Legal Services (LS);
- 4.1.4.7 Information Technology and Management System (ITMS);
- 4.1.4.8 Field Offices (Luzon, Visayas, and Mindanao);
- 4.1.4.9 Philippine Independent Power Producers Association (PIPPA) members and other concerned power generation companies;
- 4.1.4.10 Philippine Electric Plant Owners Association (PEPOA);
- 4.1.4.11 National Power Corporation (NPC);
- 4.1.4.12 National Grid Corporation of the Philippines (NGCP);
- 4.1.4.13 National Transmission Corporation (TransCo);
- 4.1.4.14 Power Sector Assets and Liabilities Management Corporation (PSALM);
- 4.1.4.15 Independent Electricity Market Operator of the Philippines (IEMOP);
- 4.1.4.16 National Electrification Administration (NEA);
- 4.1.4.17 Manila Electric Company (MERALCO);
- 4.1.4.18 Philippine National Oil Company (PNOC);
- 4.1.4.19 Philippine Institute of Petroleum (PIP) member companies;
- 4.1.4.20 Independent Philippine Petroleum Companies Association (IPPCA) member companies; and
- 4.1.4.21 Other oil and gas industry participants.

4.2 **MANDATE AND FUNCTIONS.** The TWG-ESER shall oversee the implementation of this Department Circular and perform the following functions:

- 4.2.1 Ensure the NECP for "The Big One" is adopted by the concerned energy sector stakeholders and participants;
- 4.2.2 Enhance, harmonize and regularly update the vulnerability and risk assessment and impact analysis of energy facilities that are susceptible to the effects of "The Big One";
- 4.2.3 Formulate a PAP relative to the prevention, mitigation and reduction of risks and vulnerabilities to the "The Big One" and enhancement of the disaster response arrangements;
- 4.2.4 Identify and coordinate the necessary pre-arrangements as part of the

disaster preparedness measures for the effective execution of the response arrangements indicated in Annex G of the NECP for "The Big One";

- 4.2.5 Design and facilitate the regular conduct of discussion-based exercises (i.e., seminars, workshops, tabletop exercises, operation-based exercises such as drills, functional exercises, or full-scale exercises) on earthquake preparedness of the energy sector based on the NECP for "The Big One";
- 4.2.6 Conduct science-based research in coordination with relevant agencies or organizations to improve the earthquake resilience of energy infrastructures, including but not limited to hardening measures, systems improvement, stockpiling, and standards;
- 4.2.7 Invite other agencies and government instrumentalities or affected stakeholders, as may be deemed necessary to attain the objectives of this Circular;
- 4.2.8 Closely coordinate, collaborate and seek guidance from the DOST-PHIVOLCS, concerned National Disaster Risk Reduction and Management Council (NDRRMC) members, Metro Manila Development Authority (MMDA), PMO-ERG and other relevant agencies on their plans and programs to ensure integration and coordinated implementation of the action plans and preparedness measures for the earthquake resilience of GMMA;
- 4.2.9 Conduct a quarterly meeting to monitor the progress of the Priority Action Plans (PAPs) and other projects related to earthquake resiliency of the energy infrastructures;
- 4.2.10 Review and update the NECP for "The Big One" every three (3) years or as may be necessary; and
- 4.2.11 Perform other functions as may be assigned by the TWG-ESER Chairperson.

SECTION 5: HARMONIZED CONTINGENCY PLAN AND BUSINESS CONTINUITY PLANS FOR THE BIG ONE SCENARIO FROM THE WWF

- 5.1 All concerned energy stakeholders and participants from the power and oil and gas sectors that are susceptible to the effects of "The Big One" from the WWF shall adopt the response arrangements indicated in the NECP for "The Big One" based on the scenario assumptions, and update/align their existing BCPs and/or contingency plans based on best practices and relevant international standards as appropriate.
- 5.2 All concerned energy stakeholders and participants from the power and oil and gas sectors that are susceptible to the effects of "The Big One" from the WWF without BCPs and/or contingency plans must develop their own plans consistent with the NECP for "The Big One".
- 5.3 The DOE and its attached agencies shall likewise develop their contingency plans consistent with the scenario assumptions and response arrangements of

the NECP for "The Big One".

- 5.4 NGCP and MERALCO shall prepare contingency and restoration plans consistent with the scenario assumptions and response arrangements of the NECP for "The Big One".
- 5.5 NEA shall facilitate the development of the contingency plans of the electric cooperatives (ECs) that are susceptible to the effects of "The Big One" from the WVF.
- 5.6 After one (1) year from the effectivity of this Department Circular, the BCPs/contingency plans, BCP simulation reports and other programs developed and conducted in line with the NECP for "The Big One" shall be included in the Resiliency Compliance Plan (RCP) submitted to DOE, subject to review and validation under Sections 5.2 and 5.3 of the DC No. DC2022-06-0028.

SECTION 6: SCENARIO PLANNING AND IMPACT ASSESSMENT ON EARTHQUAKE

- 6.1 The concerned energy sector stakeholders and participants shall adopt the Rapid Earthquake Damage Assessment System (REDAS) and GeoRiskPH systems and tools developed by the DOST-PHIVOLCS, or other relevant tools and methodology to identify and assess the impact of earthquake on energy infrastructures.
- 6.2 The concerned energy sector stakeholders and participants shall develop a harmonized exposure map of energy facilities for its scenario planning for "The Big One".

SECTION 7: FUNDING FOR EARTHQUAKE RESILIENCY

- 7.1 The DOE, NEA, NPC and PSALM budgetary requirements covering personal services, maintenance and other operating expenditures and capital outlay necessary for the adoption and implementation of the NECP for "The Big One" shall be sourced from the General Appropriations Act (GAA) subject to the usual planning, budgeting and accounting rules and regulations. As stipulated in Section 22 of R.A. 10121, the DOE shall allocate portion of the appropriations in accordance with the guidelines of the NDRRMC in coordination with the Department of Budget and Management (DBM).
- 7.2 Private companies from the power generation, transmission and distribution sectors as well as downstream oil and gas, are encouraged to allocate funds and other relevant resources for the implementation of the NECP for "The Big One" and its corresponding programs and projects.

SECTION 8: REGULATORY SUPPORT

- 8.1 Within one (1) month from the effectivity of this Department Circular, the DOE shall coordinate with other concerned government agencies and industry participants for the issuance of appropriate guidelines for the implementation of

the NECP for "The Big One".

- 8.2 The Energy Regulatory Commission (ERC) shall promulgate related guidelines which will ensure timely and effective compliance with the policies set forth herein, including processes and procedures for resource allocation and recovery, as well as reportorial requirements.

SECTION 9: SEPARABILITY CLAUSE

If for any reason, any section or provision of this Circular is declared unconstitutional or invalid, the other parts or provisions that are not affected shall continue to be in full force and effect.

SECTION 10: REPEALING CLAUSE

Nothing in this Circular shall be construed as to amend, supersede, or repeal any of the mechanisms or institutions already existing or responsibilities already imposed and provided for under any existing law, rule or contract.

SECTION 11: EFFECTIVITY

This Circular shall take effect fifteen (15) days after its filing with the University of the Philippines Law Center – Office of National Administrative Register and publication in at least two (2) newspapers of general circulation.

Issued on JAN 11 2023 at the DOE, Energy Center, Rizal Drive cor. 34th St., Bonifacio Global City, Taguig City.


RAPHAEL P. M. LOTILLA
Secretary

