

THE PRIME MINISTER

No. 452/QĐ-TTg

THE SOCIALIST REPUBLIC OF VIETNAM

Independence - Freedom - Happiness

Hanoi, April 12, 2017

DECISION

APPROVING THE PROPOSAL TO BOOST TREATMENT AND USE OF ASH, SLAG AND GYPSUM DISCHARGED FROM THERMAL POWER PLANTS, CHEMICAL AND FERTILIZER PLANTS FOR PRODUCTION OF BUILDING MATERIALS AND FOR USE IN CONSTRUCTION PROJECTS

THE PRIME MINISTER

Pursuant to the Law on Government Organization dated June 19, 2015;

Pursuant to the Law on Environmental Protection dated June 23, 2014;

Pursuant to the Government's Decree No. 24a/2016/ND-CP dated April 5, 2016 on management of building materials;

In light of the request made by the Minister of Construction,

HEREBY DECIDES

Article 1. To approve the proposal to boost treatment and use of ash, slag and gypsum discharged from thermal power plants, chemical and fertilizer plants for production of building materials and for use in construction projects with the following main contents:

I. VIEWPOINTS ON TREATMENT AND USAGE OF ASH, SLAG AND GYPSUM

1. Ash, slag and gypsum (including gypsum obtained from furnace fumes emitted from thermal power plants, abbreviated as FGD (Flue Gas Desulfurization) gypsum; gypsum discharged from chemical and fertilizer plants, abbreviated as PG (Phosphogypsum) gypsum) must be treated and used in an effective manner. Using ash, slag, FGD and PG gypsum for production of building materials and in construction projects is to serve the purpose of environmental protection and reduction in use of land areas as storage yards and in use of natural resources and minerals for production of building materials as well as assurance of sustainable development.

2. Plant owners shall have the burden of taking necessary actions to treat and consume ash, slag and FGD and PG gypsum produced during the production process.

3. Ash, slag or FGD and PG gypsum, whether pre-treated or post-treated, which conforms to technical standards, regulations and instructions to serve as raw materials used for production of

building materials and in construction projects shall be classified as building material commodities and subject to applicable laws and regulations on commodity products.

4. Ash, slag or FGD and PG gypsum conforming to technical standards, regulations and instructions shall be preferred to be used as raw materials for production of building materials and in engineering and construction projects (civil, industrial engineering and construction, traffic and transportation, agriculture and rural development and mine backfilling works, etc.).

5. The Government shall provide preferential treatment policies for organizations or individuals involved in processing and use of ash, slag, FGD and PG gypsum as raw materials for production of building materials or in engineering and construction projects.

II. OBJECTIVES

1. General objectives: By 2020, the amount of ash, slag and gypsum deposited in storage yards of each thermal power plant, chemical and fertilizer plant must be treated and consumed so that such amount is less than total volume thereof discharged within 2 years of production.

2. Specific objectives: By 2020, the amount of ash, slag, FGD and PG gypsum treated and used as raw materials for production of building materials and in construction projects will be expected to account for 52% of total accumulated volume thereof (approximately 75 million tonnes, including 56 million tonnes of ash and slag produced from thermal power plants; 2.5 million tonnes of FGD gypsum; 16.5 million tonnes of PG gypsum) with the following estimates:

- About 1 million tonnes of ash and slag produced from thermal power plants will be used as mineral additives during the cement manufacturing process; about 7 million tonnes thereof will be used as partial replacement of clay in the baked clay brick manufacturing process; about 2 million tonnes thereof will be used as mineral additives for manufacturing of concrete and unbaked bricks; about 25 million tonnes thereof will be used as materials for leveling work at construction sites, mine backfilling and road construction projects;

- About 1.5 million tonnes of FGD gypsum will be used as additives to adjust the setting time of hydraulic cement mortar; about 1 million tonnes thereof will be used as materials for manufacturing of construction plasterboards;

- About 3 million tonnes of PG gypsum will be used as additives to adjust the setting time of hydraulic cement mortar; about 1.5 million tonnes thereof will be used as materials for manufacturing of construction plasterboards; about 12 million tonnes thereof will be used as materials for leveling work at construction sites, mine backfilling and road construction projects.

III. MISSIONS AND SOLUTIONS

1. Further improvement of legislative documents, technical standards and regulations.

- Revise, amend and supplement legislative documents regarding treatment and use of ash, slag and gypsum for manufacturing of building materials and construction projects;
- Prepare and issue technical standards, regulations, instructions and economic-technical productivity norms for treatment and use of ash, slag, FGD and PG gypsum as materials for manufacturing of building materials and construction projects. This mission must be due for completion by June 30, 2018;
- Issue and provide instructions for regulations on record-keeping of costs incurred from treatment and consumption of ash, slag and gypsum discharged from thermal power plants, chemical and fertilizer plants for production of building materials and construction projects;
- Use the state budget allocations for preparing and issuing technical standards, regulations, instructions and economic-technical productivity norms for treatment and use of ash, slag, FGD and PG gypsum as materials for manufacturing of building materials and construction projects in accordance with applicable laws and regulations.

2. Science and technology research and application

- Speed up study and completion of the technology for treatment and use of ash, slag, FGD and PG gypsum for manufacturing of building materials and construction projects. Basically improve the treatment technologies and bring these technologies into operation ahead of June 2019;
- Use funds allocated by the state budget in accordance with applicable laws and regulations; simultaneously, provide incentive policies for owners of facilities releasing wastes shall be obliged to make their financial contributions and provide their financial support to accelerate the science and technology study and application process for treatment and use of ash, slag, FGD and PG gypsum for manufacturing of building materials and construction projects;
- Apply incentive policies to research, application and trial production projects and programs for treatment and use of ash, slag, PGD and PG gypsum in accordance with the Law on Science and Technology.

3. Treatment and usage of ash, slag and gypsum

- Owners of waste-discharging facilities and stakeholders of construction and investment projects, and host entities of thermal power plants, chemical and fertilizer plants, shall be held responsible for submitting their proposals for treatment and consumption of ash, slag and gypsum to the Ministry of Industry and Trade. By 2020, ensure that an area of each dumping ground will not exceed the amount of wastes released within 2 years of mean production. This regulation shall be specifically applied to (1) active plants from which proposals for treatment and use of ash, slag and gypsum produced have been submitted before December 31, 2018; (2) projects that are under construction, require modified proposals and submission of the accepted proposals before officially being put into operation; (3) projects that are at the stage of pre-investment arrangement, proposal formulation and submission of the request for approval of the proposal and the investment project;

- The Government's incentive and support policies applied to investment projects on treatment of ash, slag, FGD and PG gypsum shall be the same as those so applied to investment projects on solid waste treatment in accordance with applicable laws and regulations;
- Incentive and preferential treatment policies applied to locally-manufactured mechanical engineering products used in the technological line to process ash, slag, FGD and PG gypsum for manufacturing of building materials and for use in construction projects shall be the same as those so applied to priority mechanical engineering projects;
- State-funded investment and construction projects must prefer to use ash, slag and gypsum or building materials made from ash, slag, FGD and PG gypsum provided these materials or products have the same economic and technical efficiency as other ones;
- Owners of waste-discharging facilities and facilities for processing and use of ash, slag, FGD and PG gypsum as raw materials for production of building materials or for use in engineering and construction projects shall be obligated to comply with regulations laid down in Article 40 of the Decree No. 24a/2016/ND-CP;
- Where it is unlikely that ash, slag, FGD or PG gypsum is processed, used as raw materials for manufacturing of building materials or for use in construction projects, they may be treated like non-recyclable solid wastes.

4. Enhancement of information dissemination, education and communications activities

- Design programs, prepare materials, carry out information dissemination, organize training, drilling and career development sessions or courses attended by public officers and employees charged with management, treatment and use of ash, slag, FGD and PG gypsum;
- Make available for the public information about technical standards, regulations, instructions and economic-technical productivity norms for treatment and use of ash, slag, FGD and PG gypsum as raw materials for manufacturing of building materials and for use in construction projects;
- Increase and diversify communications methods in order to ensure that public officers at all administrative levels, enterprises and population are all aware of significance of processing and reuse of ash, slag, FGD and PG gypsum;
- Stimulate international cooperation in science and technology research and exchange in the field of treatment and use of ash, slag, FGD and PG gypsum as raw materials for manufacturing of building materials and for use in engineering and construction projects.

IV. IMPLEMENTATION

1. The Ministry of Construction

- Undertake and cooperate with relevant Ministries and authorities, People's Committees of centrally-affiliated cities and provinces in necessary arrangements for and inspection of implementation of this Decision and submission of annual and final review reports on execution of the Proposal to the Government by end of 2020;

- Issue within its jurisdiction or cooperate with relevant Ministries or authorities in revision, supplementation or request for competent authorities' approval of release of technical standards, regulations, instructions and economic-technical productivity norms for treatment and use of ash, slag, FGD and PG gypsum as raw materials for manufacturing of building materials and for use in construction projects;

- Undertake and conduct researches or projects on trial production relating to treatment and use of ash, slag, FGD and PG gypsum as raw materials for manufacturing of building materials and for use in engineering and construction projects;

- Undertake and cooperate with relevant Ministries and authorities, People's Committees of centrally-affiliated cities and provinces in resolution or submission of a request for competent authorities' resolution of issues arising from development and execution of the Proposal;

- Command that State-funded civil and industrial construction projects must prefer to use ash, slag and gypsum or building materials made from ash, slag, FGD and PG gypsum.

2. The Ministry of Industry and Trade

- Undertake and cooperate with the Ministry of Construction, Natural Resources and Environment, the Ministry of Science and Technology and relevant entities in provision of guidance on formulation, approval of the proposal for treatment and consumption of ash, slag, FGD and PG gypsum produced by thermal power plants, chemical and fertilizer plants as provided in Point c Clause 3 Article 1 hereof; supervise treatment and consumption of ash, slag, FGD and PG gypsum during the implementation process; impose any necessary sanction on owners of waste-discharging facilities in breach of regulations laid down in this Proposal;

- Issue instructional manuals for record-keeping of costs incurred from treatment and consumption of ash, slag and gypsum discharged from thermal power plants, chemical and fertilizer plants;

- Cooperate with the Ministry of Construction in research and improvement of the technology for treatment and use of ash, slag and gypsum discharged from thermal power plants, chemical and fertilizer plants for production of building materials and for use in construction projects;

- Cooperate with the Ministry of Construction in inspection and assessment of compliance of thermal power plants, chemical and fertilizer plants with this Decision.

3. The Ministry of Natural Resources and Environment

- Provide guidance on and inspect collection, handling, storage, process and consumption of ash, slag, FGD and PG gypsum to ensure compliance with regulations on environmental protection; provide instructions for co-processing of ash, slag and gypsum for manufacturing of building materials, and resemblance of the process of manufacturing building materials directly made from ash, slag and gypsum to the process of treatment of ash, slag and gypsum;
- Reinforce, revise and amend technical standards, regulations and instructions for use of ash, slag and gypsum for mine backfilling activities;
- Provide guidance on disposal and burial of ash, slag and gypsum when such amount of ash, slag and gypsum is unusable.

4. The Ministry of Science and Technology

- Undertake and cooperate with the Ministry of Construction and other relevant Ministries, sectoral departments and local authorities in offer of support for research on science and technology missions relating to treatment and use of ash, slag and gypsum discharged from thermal power plants, chemical and fertilizer plants for production of building materials and for use in construction projects;
- Conduct audit of national technical standards and regulations; issue national standards for treatment and use of ash, slag, FGD and PG gypsum as raw materials for manufacturing of building materials and for use in construction projects.

5. The Ministry of Transport

- Improve and revise technical standards, regulations and instructions for use of ash, slag and gypsum as building materials in the road construction process;
- Command that State-funded road infrastructure project investors must prefer to use ash, slag and gypsum or building materials made from ash, slag, FGD and PG gypsum.

6. The Ministry of Agriculture and Rural Development

- Improve and revise technical standards, regulations and instructions for use of ash, slag and gypsum as building materials in irrigational works and for other purposes relating to construction of agriculture and rural development infrastructure facilities;
- Command that State-funded agriculture and rural development project investors must prefer to use ash, slag and gypsum or building materials made from ash, slag, FGD and PG gypsum.

7. People's Committees of centrally-affiliated cities and provinces

- Undertake and cooperate with the Ministry of Industry and Trade and relevant entities in recall of a portion of the dumping ground exceeding the permitted area for storage of ash, slag and

gypsum produced on average within 2 years after considering the operational scale and capacity of each plant located within their jurisdictions;

- Command that State-funded construction project investors must prefer to use ash, slag and gypsum or building materials made from ash, slag, FGD and PG gypsum;
- Cooperate with relevant Ministries, authorities in inspection, supervision and timely imposition of sanctions on entities, organizations or individuals within their jurisdictions that fail to strictly comply with regulations on management, treatment and use of ash, slag, FGD and PG gypsum as raw materials for manufacturing of building materials and for use in construction projects, and take immediate actions to deal with any difficulty that may arise;
- Expedite, examine and supervise release of wastes and treatment of ash, slag and gypsum sources within their jurisdictions. Encourage enterprises within their jurisdictions to use ash, slag, FGD and PG gypsum as raw materials for production of building materials or in engineering and construction projects;
- Prepare a consolidated report on cases of failure to strictly comply with requirements set out in the Proposal for submission to the Ministry of Construction and the Ministry of Industry and Trade prior to filing of a final report to the Government.

8. Owners of waste-discharging facilities

Owners of waste-discharging facilities shall assume responsibility for stringently complying with requirements set forth in this Proposal and other relevant regulations.

9. The duration to implement the Proposal: From 2017 to 2020.

Article 2. This Decision shall enter into force from the signature date.

Article 3. Ministers, Heads of Ministry-level agencies, Heads of Government-controlled bodies, Presidents of People's Committees of centrally-affiliated cities and provinces, Chairs of Board of Members, and General Director of state-owned economic corporations or incorporations, shall be responsible for implementing this Decision./.

**PP. THE PRIME MINISTER
THE DEPUTY PRIME MINISTER**

Trinh Dinh Dung