# VIETNAM WHOLESALE ELECTRICITY MARKET: TRANSMISSION CONGESTION MANAGEMENT AND PRICING METHOD

Dinh Thanh Viet, Nguyen Hung, Nguyen Tan Hung

#### Abstract:

This paper presents the transition from Vietnam's traditional electricity market to Vietnam's wholesale electricity market. The Vietnam Competitive Wholesale Electricity Market (VWEM) structure is presented, including the components, their role and the mechanism of direct market operation. Problems arising in the operation of the electricity market will be raised. There are models for calculating electricity prices based on node pricing and regional price analysis. Congestion management and transmission Pricing method of the Vietnam Wholesale Electricity Market in considered. Simulation results for Vietnam Wholesale Electricity Market for the stage of 2017-2022 years are presented to illustrate the effectiveness of the proposed method.

**Key words:** Power Flow (PF), Optimal power flow (OPF), Linear Programming (LP), Locational Marginal Price (LMP), Transmission Congestion Management (TCM), Vietnam Wholesale Electricity Market (VWEM), System and Market Operator (SMO).

## **APPLICATION FORM (**for each of coauthors)

First name and surname: Dinh Thanh Viet

Degree, academic rank: Assoc.Prof., PhD

Country, city, institution: The University of Da Nang, Da Nang city, Vietnam Position: Assoc.Prof.

Address (Office): 41 Le Duan St., Hai Chau Dist, Da Nang City, Vietnam

Phone: +84-974736363

E-mail: dtviet@ac.udn.vn

Form of participation (report, co-authorship, panel discussion): co-authorship № of «Nova Poshta"( New Post) warehouse

Housing reservation: Yes\_\_ No\_\_

### APPLICATION FORM (for each of coauthors)

First name and surname: Hung Nguyen

Degree, academic rank: PhD

Country, city, institution: Hutech University of Technology, Hochiminh city, Vietnam.

Position: Lecturer

Address (Office): 474A Dien Bien Phu St., Ward 25, Binh Thanh Dist, Hochiminh City, Vietnam

Phone: +84-28.35120.255

E-mail: n.hung@hutech.edu.vn

Form of participation (report, co-authorship, panel discussion): co-authorship

№ of «Nova Poshta"(New Post) warehouse

Housing reservation: Yes\_\_\_ No\_\_\_

## APPLICATION FORM (for each of coauthors)

First name and surname: Nguyen Tan Hung

Degree, academic rank: Master in Engineering

Country, city, institution: Hutech University of Technology, Hochiminh city, Vietnam.

Position: PhD student

Address (Office): 474A Dien Bien Phu St., Ward 25, Binh Thanh Dist, Hochiminh City, Vietnam

Phone: +84-28.35120.255

E-mail: hungnguyentan1981@gmail.com

Form of participation (report, co-authorship, panel discussion): co-authorship

№ of «Nova Poshta"(New Post) warehouse

Housing reservation: Yes\_\_\_ No\_\_\_