KL UNIVERSITY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DATE **:** 19-03-2016

EVENT **:** Subject Based Seminar

TIME **:** 11.00 A.M to 2:30 P.M

VENUE **:**E005, K L University

ORGANIZED BY **:** E.E.E Dept.

FACULTY INCHARGE **:** T. Praveen Kumar

EVENT DESCRIPTION:

'Subject Based Seminar' is an activity organized by Dept. Of E.E.E of K L University on 19-03-2016 from 11.00 A.M to 2:30 P.M. The Seminar is given by Dr. V.Sarkar, Asst.Professor, Department of Electrical Engineering, IIT-Hyderabad. The topic of the Seminar is "**Financial Transmission Rights**". In order to contribute to the Department mission, Seminar is organized in our campus premises to bring awareness among the faculty E.E.E department of K L University regarding Financial Transmission Rights**.**

SESSION ACTIVITES:

The Department of E.E.E has made proper arrangements for picking up the guest and for the comfortable stay of the Guest in the campus. The Department has made the necessary arrangements for the Guest Lecture activity in the E005.The event was started by inviting the guest of honor Dr. V.Sarkar garu on to the dais to start the lecture. Dr. V.Sarkar garu has started the lecture with the introduction of topic with the small example of fever.

The Faculty of EEE and M.Tech II year students have actively participated in this session. At the end of the lecture, honorable Chancellor Prof .Rama Moorthy sir disclosed some Questions to resource person. The session ended with Vote of thanks. After the end of the lecture, Faculty have thanked the guest for sharing such valuable information and collected material regarding the lecture delivered.

Brief Description of Lecture:

Financial Transmission Rights Background:

It is supportive mechanism of LMP. Financial Transmission Rights or FTRs allow market participants to offset potential losses (hedge) related to the price risk of delivering energy to the grid. Financial Transmission Rights (FTRs) can be purchased which gives the purchaser the right to transmit electricity on a particular stretch of network (between two nodes) during a particular time.

Locational marginal pricing disadvantage is : It rates some risks.

LMP Settlement

No	From	To	Amount($)
1	ISO	G2	80*20=1600
2	ISO	G3	50*18=900
3	L1	ISO	40*27=1080
4	L2	ISO	90*27=2430
5	(G1,L3)	ISO	100*(25-20)=500

Merchandizing surplus=500+2430+1080-900-1600=1510

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Forward contracts are also exposed to spot price risks.

Note: Allowing a free usage of the network capacity to all the bilateral transactions will not be possible. Since this may lead to negative merchandizing surplus as well as network overload.

There should be some mechanism to prevent the exposure of long term and medium-term forward contracts to the spot price. Since lone-term and medium-term forward contracts are always helpful in increasing market competitiveness. FTR means given some rights up to a Network capacity.

Immediate solution:

1. Approve the network usage of forward contracts in advance.
2. This is the classical physical transmission right approach.

Short coming of physical transmission right approach:

1. Counterflows cannot be taken in to account.
2. It is not sure whether a contract will be really executed or not.
3. A physical transmission right is valueless unless there is a real power transmission associated with it.

Transmission rights in financial form seen to be better option.

If Congestion in both lines are fully executed the line flow will be 50MW.

Specifications of an FTR:

1. Source node
2. Sink node
3. Type(obligation/option)
4. Megawatt amount
5. Validity period
6. Time slots of use.

For example:

An obligation FTR of 100MW from node 1 to 2 which is valid for years 2014-2020 and can be used only during the peak hours of a day in summer of winter.

Evaluation of an FTR:

1. Each FTR is assigned an hourly value bases up on the day-ahead LMP outcome.
2. An FTR may be active or inactive(Value=0).
3. Obligation of FTR always remains inactive.
4. An option FTR is active when LMP difference over its path is Positive.
5. Owner of an FTR is paid by ISO account to hourly value of its FTR.

- LMP difference over an obligation FTR becomes negative. Owner, in essence, has to pay to the ISO. If network losses are also considered in dispatch.
- The merchandizing surplus should be sufficient to male full FTR payments.
- The revenue adequacy of FTRs can be ensured by means of a mechanism called simultaneous feasibility test.

PHOTOS:

Asst.Prof.V.Sarkar delivered a Seminar on "Transmission Rights Background."

Honourable Chancellor of the K L University Prof. Ram murthy ,Professors, faculty and of Electrical Department listening the Seminar along with the students.

Faculty incharge **HOD,EEE dept**