

പതിമൂന്നാം കേരള നിയമസഭ

പതിനഞ്ചാം സമ്മേളനം

നക്ഷത്ര ചിഹ്നമിടാത്ത ചോദ്യം നമ്പർ. 2283

08.12.2015-ൽ മറുപടിയിൽ

കടമ്പഴിപ്പുറത്ത് 33 കെ. വി. സബ്സ്റ്റേഷൻ.

ചോദ്യം

ശ്രീ. എം. ഫംസ :

ഉത്തരം

ശ്രീ. ആര്യാടൻ മുഹമ്മദ്
(ഊർജ്ജ വകുപ്പു മന്ത്രി)

- (എ) ഒറ്റപ്പാലം നിയോജകമണ്ഡലത്തിലെ കടമ്പഴിപ്പുറത്ത് 33 കെ. വി. സബ് സ്റ്റേഷൻ ആരംഭിക്കുന്നതിനായി തീരുമാനമെടുത്തിട്ടുണ്ടോ ; എങ്കിൽ എന്നാണ് തീരുമാനം എടുത്തത് ;
- (ബി) പ്രസ്തുത സബ്സ്റ്റേഷൻ ആരംഭിക്കുന്നതിനായി എന്തെല്ലാം നടപടികൾ നാളിതുവരെ സ്വീകരിച്ചു ;
- (സി) സബ്സ്റ്റേഷൻ ആരംഭിക്കുന്നതിന്റെ ഭാഗമായി നടത്തിയ സാങ്കേതിക പഠനത്തിന്റെ കാലിക സ്ഥിതി വ്യക്തമാക്കാമോ ; സാങ്കേതിക പഠന റിപ്പോർട്ട് ലഭിച്ചിട്ടുണ്ടോ ; ഉണ്ടെങ്കിൽ പകർപ്പ് നൽകുമോ ?

- (എ) കടമ്പഴിപ്പുറത്ത് 33 കെ. വി. സബ്സ്റ്റേഷൻ നിർമ്മിക്കുന്നതിനുള്ള നിർദ്ദേശത്തിന്റെ
- (ബി) സാങ്കേതിക പരമായ സാദ്ധ്യത (technical
- (സി) feasibility) സംബന്ധിച്ച് സാങ്കേതിക പഠനം നടത്തിയതിന്റെ അടിസ്ഥാനത്തിലുള്ള റിപ്പോർട്ട് പ്രകാരം ഇവിടെ സബ്സ്റ്റേഷന്റെ ആവശ്യകത ഉടനെ ഇല്ലെന്നു കാണുന്നു. എന്നിരുന്നാലും പഠനത്തിൽ പരാമർശിച്ച പ്രകാരമുള്ള 2 MVA ശേഷിയുള്ള പോൾ മൗണ്ടഡ് (pole mounted) ട്രാൻസ്ഫോർമർ സ്ഥാപിക്കുന്നതിനുള്ള പ്രൊപ്പോസൽ കെ. എസ്. ഇ. ബി. ലിമിറ്റഡ് തയ്യാറാക്കി വരുന്നു. സാങ്കേതിക പഠന റിപ്പോർട്ടിന്റെ പകർപ്പ് അനുബന്ധമായി ചേർക്കുന്നു.

സെക്ഷൻ ഓഫീസർ.

(3) കടമ്പാഴ് 2283



KERALA STATE ELECTRICITY BOARD LIMITED

Office of the Director (Transmission & System Operation)
V. P. Road, Bangalore Junction, Thiruvananthapuram - 695 001, Kerala
Phone: (0471) 251-4375, 241(62), 341(600000) Fax: 341-2414738
E-mail: dtd@ksieb.kerala.gov.in, dtd@ksiebnet.com

No. D(T&SO)/PSE/New Proposals/Kadampazhipuram/2015-16/65 Date: 01.06.2015

To
The Deputy Chief Engineer
Transmission Circle
Palakkad.



Sub: Proposal for construction of 33kV substation, Kadampazhipuram. Studies to explore the technical feasibility - reg

Ref: Letter from that office No. TCP/DB10/New Proposals/33kV Kadampazhipuram/14-15/1287 dtd: 10.12.2014.

St: Advancing to answer the New studies were carried out for the proposed substation at Kadampazhipuram, Palakkad district. The proposed station will be installed with a capacity of 1 X 5MVA 33/11kV transformer will be fed through a 1.5km tap line from 33kV Parak - Sreekrishnapuram line (can be converted to 33kV Kongad - Sreekrishnapuram line by suitable network arrangement).

Following points were noted vide ref.

- > The Kadampazhipuram area is fed from 33kV substation, Kongad through 11.75km Kadampazhipuram feeder, which has a nominal load of 75A.
- > The area is facing supply interruptions during natural calamities.

Proposed configuration

As per performa for load flow studies, the 11kV feeders proposed to emanate from 33kV substation, Kadampazhipuram are as follows:

Name of 11kV feeder	Length (kms.)	Expected Voltage Regulation (%)
Katakalkucuss	8.65	3.2
Mannampatra	1.6	2.41

The following 11kV load diversion is planned for the proposed 33kV substation, Kadampazhipuram.

From 33kV substation, Kongad:

- Kadampazhipuram 35A Present voltage regulation = 9.26%, length = 11.75km. Expected voltage regulation after load diversion to the proposed substation = 1.2%.

From 33kV substation, Sreekrishnapuram:

- Panchapadam 130A Present voltage regulation = 3.1%, length = 6.08km. Expected voltage regulation after load diversion to the proposed substation = 0.13%.

Assumptions made:

The un-restricted system demand during the period under consideration was assumed to be 4160 MW.

Analyzed Scenarios:

Case-1: Base Case.

Case-2: With 33kV station at Kadampazhipuram.

Observations:

1. With the 33kV station at Kadampazhipuram, the system loss in EHT system is seen decreased by 30kW with respect to base case.
2. The % loading of transformers in various substations as seen in the base case and with 33kV substation, Kadampazhipuram are tabulated below.

Name of the substation	Capacity	% Transformer Loading	
		Base Case	With 33kV substation, Kadampazhipuram
33kV Kongad	2 X 5MVA	39	32
33kV Sreekrishnapuram	2 X 5MVA	55	61
110kV Kalladitode	1 X 12.5MVA		30
	1 X 10MVA		27

3. With 33kV substation, Kadampazhipuram service, a 70m voltage profile is noted in the concerned substations other than 33kV Kongad and Sreekrishnapuram substations, from which load is transferred to the proposed substation. The voltage profile in the concerned substations under various scenarios is tabulated below.

Sl.No.	Name of the substation	Voltage (kV)	
		Case-1	Case-2
1	110kV Veennakkara	105.76	105.73
2	110kV Parak	104.84	104.8
3	33kV Kongad	31.13	31.10
4	33kV Sreekrishnapuram	29.75	29.83
5	33kV Manampara	31.2	31.17

Conclusion

Based on the study conducted, GPS location of the proposed substation and reliability of power in the concerned area following conclusions are drawn.

- No appreciable decrease in system loss is seen with the proposed 33kV substation at Kadampazhipuram.
- No improvement in voltage profile is noted in the nearby substations around Kadampazhipuram region.
- As per the Monthly Operating Review received in this office, the load growth in the concerned area is very poor.
- The transformer loadings of nearby substations around Kadampazhipuram region are seen under loaded even in the base case.

Hence based on the various studies carried out and considering the present loading conditions in the area, the proposed 33kV substation at Kadampazhipuram may be considered at a later stage, as and when the demand in the area shows an appreciable increase from the current value. To improve the voltage profile in the Kadampazhipuram area, additional 11kV feeder may be drawn from 110kV substation, Kalladikode. As per Geo-Referenced Map, a distance of only 9.2kms. is noted from 110kV substation Kalladikode to Kadampazhipuram. However, the feasibility of drawing additional 11kV feeder has to be ascertained from the field. Alternatively, in order to improve the quality of supply in the area, feasibility for providing a pole mounted 2MVA, 33/11kV Transformer or Transformer with RMT / Auto-recloser for feeding the local area can also be explored.

Further, under the existing scenario, suitable 11kV bus arrangement has to be done between 110kV substation, Kalladikode and 33kV substations at Kongad and Srookrishnapuram, so as to maintain a balanced loading in substations in the concerned region.

Encl on top of this for the proposed 33kV substation at Kadampazhipuram for 11/12/2015
 Copy to the Dy. Engineer, Transmission Circle, Kollam
 Copy to the Asst. Engr. 11/12/2015

362/15/12/2015
 Yours faithfully

[Signature]
 Dy. Chief Engineer,
 Transmission Circle, Kollam
 (K. A. C. E.)

[Signature]
 Executive Engineer
 (Power System Engineering)

Copy submitted to:
 The Chief Engineer (Transmission, North).

[Signature]

മെട്രോ ഓഫീസർ