



Electricity Networks Planning Department

Planning Guidelines

For

The application of Electricity Building Permit

(For Connected Loads Totalling Less Than 5MW)

August 2006

This Guideline is for information purposes only. Kahramaa has used its best endeavours to ensure that the information in this Guideline is correct at the time of publishing. This Guideline is subject to change at any time without prior notice.

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1. Purpose

This Guide lines gives a guideline and overview of the building permit procedures, regulations and conditions from network planning point of view. The Guide lines outlines for the consultants the policies that dictate the requirements for the prompt approval of Building Permits from Distribution Planning Unit (DPU), and clearly defines the technical information required with the submittals to facilitate the processing of these applications.

2. Scope

This Guide lines applies to all Building Permit applications where the total connected load (whether existing and/or proposed) for a plot is below 5MW and to some extents for applications of more than 5 MW. The earlier applications are processed by the Distribution Planning Unit. Consultants are required to adhere strictly to this Guide lines during building permit application and wherever a deviation exists consultant has to state the deviation nature in the building permit/BP advice and address it BP Complex engineer in a note addressed to Distribution Planning Engineer.

3. Abbreviations, Definition of Terms & Key References

| | | | | | |
|------|---|--|-----|---|------------------------|
| ENA | : | Electricity Networks Affairs | KM | : | Kahramaa |
| EN | : | Electricity Networks Planning Department | BP | : | Building Permit |
| GIS | : | Electricity Network Database & GIS Section | MW | : | Megawatt |
| DP | : | Distribution Network Planning Section | EHV | : | Extra High Voltage |
| CSD | : | Customer Services Department (Kahramaa) | HV | : | High Voltage |
| D&D | : | Design & Development Unit | MV | : | Medium/Low Voltage |
| DPU | : | Distribution Planning Unit | TX | : | Transformer |
| UPDA | : | Urban Planning & Development Authority | VCB | : | Vacuum Circuit Breaker |
| QCS | : | Qatar Construction Specifications | S/S | : | Substation |

| Term | Description |
|---------------------|--|
| Infrastructure Area | Large development area that is/was designed and constructed by MMAA, UPDA and/or ASHGAL in coordination with all utilities and includes all services to houses. This area has planning assumptions and design criteria in which applicants should adhere to. |
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Key References

1. Emiri Decree No. 4 of the year 1997 regarding connection fees of electricity and water supply.
2. Circular No. 10 of the year 2002 regarding connection fees of electric and water supply.
3. Circular No. 2 of the year 2006 regarding the connection fees for the supply of electricity and water to farms and beach houses.
4. Regulations for the Installation of Electrical Wiring, Electrical Equipment and Air Conditioning Equipment (published by CSD).
5. EN-DP-G1 Distribution Planning Manual.
6. EN-DP-P1 Processing Building Permit Applications.

4. Guidelines

4.1 Pre Building Permit Advise

The consultant shall fill in the Load Notification Form (Appendix - 12 or 13) and attach 3 copies of the following:

- Policy Plan (Grid + PIN)
- Site Development Plan

KAHRAMAA will grant the approval with conditions as applicable, Type & location of substation.

It is the responsibility of the consultant to provide very accurate information to the extent that such approval is not adversely affected when submitting the Building Permit.

It is the responsibility of Consultant to get the Urban development Department approval on location of substation after Kahramaa approval (such approval must be demonstrated by UPDA stamp on Electrical Site Plan showing KM proposed substation).

THE FOLLOWING CONDITIONS SHALL APPLY:

- KAHRAMAA reserves the right to require modifications at time of BP.
- Changes to electrical layout shall make the initial KAHRAMAA approval null and void.
- For any load increase that will affect increase the maximum demand beyond 700 Amps, the applicant shall submit a revision of the NOC for approval by KAHRAMAA.
- Changes to S/S layout by applicant at BP stage without re-approval or in coordination with the ENA Civil Unit shall make the initial KAHRAMAA approval null and void.
- For any load increase that will affect the number of transformers required, the applicant shall submit a revision of the NOC for approval by KAHRAMAA
- NOC approval does not constitute a BP approval.

4.2 General Guidelines

A Building Permit will always require the following:

- The Consultant should fill in the application form with the load details, Pin number, Applicant name, Area and Consultant E-mail.

- DC-1 site plan including the policy plan approved by UPDA.
- Policy plan from UPDA showing the boundaries of the plot and the PIN number.
- Electrical site plan showing the proposed arrangements and the method of connections.
- Schematic diagram showing the load details and the size of the Transformer if required.
- In case of additional loads, consultant to provide all existing load details and a copy of any previous approved electricity building permits for the same plot.
- Maximum Demand for commercial and industrial buildings must be provided please refer to key reference 4 above.
- It is the consultant responsibility to show in the submitted drawings the scope of work which will be carried by the applicant or/and the contractor.
- Diversity Factor calculation to conform to Regulation Book (key reference 4 above) requirements.
- TX sizes/ratings (when applicable) are to be in-correlation with the M.V. panel/s ratings.
- Undertaking letters if applicable (Construction of Substation and/or Procurement of Transformer).

4.3 Load Criteria

For BP applications where the Connected load is below 5MW, the Criteria whereby a Substation is required by the applicant (TX + Civil) is when the Maximum Demand load of the plot including all buildings (Existing + Proposed) is above:

- 350 Amps (210KW, 247KVA) in the Industrial Area, whereby the applicant will have to provide a site for the substation and construct it.
- 350 Amps (210KW, 247KVA) in the Congested Areas, whereby the applicant will have to provide a site for the substation and construct it.
 - Fariq Bin Omran – Zone 37
 - Muntazah (Rawdat Al-Khail) – Zone 24
 - Bin Dirham & Mansoura– Zone 25
 - Najma – Zone 26
 - Madinat Khalifa South – Zone 34
 - Old Ghanim – Zone 16
 - Bin Mahmoud – Zone 22 & 23
 - Musherib – Zone 13
 - Fariq Abdulaziz 14
 - Old Airport – Zones 45, 46, 47, 48 & 49
 - Al-Sadd – Zone 38
 - Fariq Kulaib - Zone 35
 - Al-Nasr/Mirqab - Zone 39
 - Al-Assiri, New Salata – Zone 40
 - Azizia, New Ghanim, Soudan South - Zone 55
 - Al-Asmakh – Zone 4
 - Ghanim Qadeem North - Zone 6
 - New Doha – Zone 15
 - Al-Hitmi – Zone 17
 - Madinat Khalifa North - Zone 32
- 700 Amps (420KW, 494KVA) in the Industrial Area, whereby the applicant will have to provide a site for a substation, construct it and provide the transformer(s) – the connection shall be through an MV panel.

- 700 Amps (420KW, 494KVA) in the Planned Areas, whereby the applicant will have to provide a site for a substation, construct it and provide the transformer(s) - the connection shall be through an MV panel.
- **And whenever deemed necessary by Kahramaa.**

Other requirements:

- **It shall be noted that connection to a load of 400 Amp with an arrangement of 400 Amps size MCCB shall not be proposed nor approved any more. The maximum single connection size shall be for a 350 Amp MCCB rating.**
- The proposed MD load that can be connected to an oil-type TX can be loaded up to 90% of the TX capacity, while a dry-type TX can be loaded up to 95%.

4.4 Industrial Development Areas

For cases where applicants are allocated plots in industrial development areas such as:

- DID (Department of Industrial Development): the area is owner and administered by the responsible department within the Ministry of Industry.
- MIC (Mesaieed Industrial City): the area is owned and administered by the MIC.

In these cases, the location plan (with coordinates) produced by the concerned authority and the site plan stamped from the concerned authority shall be provided along with all the necessary documents for all BP applications in these areas and are considered the same as the policy plan and DC-1 site plan for such cases.

For DID cases, please note that an MV room shall not be proposed in the 15m x 15m substation reservation within the individual plots.

4.5 Infrastructure Areas (Existing)

In a building permit case for an infrastructure area where the load is to be restricted to the existing MCCB size. **No upgrading or additional load is allowed.** These areas are as follows:

- New Doha
- Al-Khissa
- Abu Sidra
- Al-Sailiyah
- Ain Khalid
- Old Airport
- Musaimeer
- Wakrah
- Bani Hajir

* The list above may be expanded based on UPDA/ASHGAL advice at anytime without prior notice.

4.6 Non-Planned Areas (Farms, Camel Race, Beach/Desert Houses, etc.)

The following conditions apply for the respective cases:

- In a case of a building permit for a farm, beach house, 'izba', country or desert house, the site plan showing the coordinates of the plot is required along with all other requirements. For these cases, **all supply cost is by the applicant.**
- In the case of an application for a Camel Race Course, the site plan showing the coordinates is also required along with all other requirements, and a special fee of QR7500* is to be collected at the time of connection.

* The connection fee may be changed at anytime without a prior notice.

4.7 Palaces

In the case of a building permit for a palace where the demand exceeds 700 Amps the applicant will provide the site for and construct a substation.

4.8 Independent Villas in One Plot

In a building permit case where the maximum demand is beyond 700 Amps, and totally independent villas with separate entrance from public roads are proposed in the same plot, the applicant shall provide a site for and construct the substation, provide the transformer(s), and bear all costs associated with supply **except** for the HV Switchgear equipments and the single core cables from the transformer to the Feeder Pillar.

This is subject to the approval of the management and only if the orientation of the plot requires such arrangement.

4.9 Substation Requirements

The substation requirements for the different cases are as follows:

In case of buildings:

- If there is Boundary Wall ,the substation location could be inside the building(in line with the external face of the building) or out side of the building (in line with the Boundary wall)
- If there is no Boundary wall, the location of the substation must be in line with the external face of the building

In case of compounds:

- If the substation is Outdoor , the location of the substation must be in line with the Boundary Wall
- If the substation is Indoor, the location of the substation must be 2 meter away from the Boundary wall inside the Plot.
- The load requirements are up to 1600 KVA, the consultant shall propose an Outdoor Substation with 1 Extensible Ring Main Unit + Additional Feeder Switch +(Transformer)+ MV panel (in a case where there is no future needs for a 2nd TX, if there is a future needs then an indoor substation conditions are applied), refer to drawing number 1.

- The load requirements are in the order of 2 TX's, the consultant shall propose an Indoor Substation with HV room for 6 Panels, refer to drawing number 2.
- The load requirements are in the order of 3 TX's, the consultant shall propose an Indoor Substation with HV room for 8 Panels, refer to drawing number 3.
- The load requirements are in the order of 4 TX's, the consultant shall propose an Indoor Substation with HV room for 9 Panels, refer to drawing number 4.
- In the case of a foreseen future load, it is the responsibility of the consultant to ensure that necessary provisions are in place.
- The distance between the MV room and the TX room shall be such that the length of the single core cables from the TX to the MV panel shall not exceed 10m.
- The distance from a Remote S/S to the HV room shall be such that the cable length shall not exceed 200m. The owner shall provide the inter-trip cable and a 240V UPS if the length of this cable exceeds 75m.

If the proposed Substation has a basement underneath the transformer(s) shall be dry type, and it is the responsibility of the consultant to provide all the necessary undertakings. The consultant shall propose an RCC (Reinforced Cement Concrete) trench/tunnel for the incoming Kahramaa HV cables. Ventilation (preferably air conditioning) requirements must be met; the details of which must be provided with the proposal.

If the TX room is located in the basement, the TX shall be dry type, and it is the responsibility of the consultant to provide all the necessary undertakings. The consultant shall propose RCC trench/tunnel for the incoming Kahramaa HV cables.

In the case of a Bus-Duct from the TX secondary to the MV panel, it is the responsibility of the consultant to provide an undertaking for the supply and replacement (if required).

It is the responsibility of the consultant to study safety, fire, noise and electromagnetic hazards from any electrical equipment and installations, and propose suitable measures through a proper design to mitigate such risks.

4.10 Civil Requirements

4.10.1 O/D Substations:

in case where the plot total size is less than 1000 SQ meters and the substation is inside the proposed building where the proposed TX is an oil type TX where the S/STN are located in the Ground floor (no basement beneath), the specifications should be as follows:

- The required S/STN consists of :
 - RMU + Oil Type TX.
- Set back of the RMU Plinth from the nearest wall should be not less than (0.80 M).
- Width of the RMU plinth should be (0.75 M).
- Distance between the RMU plinth and TX plinth should not be less than (1.5 M).
- The width of the TX plinth should be (0.8 M).
- The set back of the TX plinth to the nearest wall should not be less than (1.5 M).
- All the plinths top levels should be (+0.40 M from the Road facing the S/STN which is assumed 0 level).
- The bottom level of all of the plinths should be at (-0.90 M) minimum from the assumed road 0 level.
- The total length of the plinth should not be less than (3.0 M) for RMU and (3.2 M) for TX plinth, with front set back not less than (0.80 M).

- The floor of S/STN room could be back-filled area, or concrete where a trench must be provided with size (0.8m width *1.5m depth).
- The height should not be less than (3.65 M) from the top of the Plinth.
- A separate door for the RMU beside the designated door for the TX is required.
- **The doors dimensions should be :**
 - RMU door dimensions should be (1.5 M X 2.6 M)
 - TX door dimensions should be (2.4 M x 2.6 M)
 - All the doors should be facing the main road.

General Notes:

- Crane and cable access to be available always.
- No services inside substation.
- In case of an M.V. room the finished floor level to be very smooth and the tolerance not to be more than (± 3 mm) maximum.
- Contact Kahramaa's Civil Unit before starting the construction of substation, work without stage-wise inspection and approval will be rejected.
- Under taking of responsibility of the Structural design is to be submitted to KM at building Permit stage. Please refer to (Appendix 8)
- Elevation drawings to be submitted to KM before starting the construction of the substation.
- Substation rooms' height is (3.65m) minimum.
- Substation levels based on the front road level = ± 0.00 .
- M.V. room details to be designed & checked by the consultant.
- TX Plinth details to be designed & checked by the consultant (if the TX is dry type).
- Elevation of the substation must be matching with that of the main building (design, colour, etc.).

4.10.2 O/D Substations:

in case where the plot total size is equal to or more than 1000 SQ meters and the substation is inside the proposed building where the proposed TX is an oil type TX, where the S/STN are located in the Ground floor (no basement beneath), the specifications should be as follows:

- The required S/STN consists of :
 - RMU +Feeder Switch + Oil Type TX
- Set back of the RMU plinth from the nearest wall should be not less than (0.80 M).
- Width of the RMU plinth should be (0.75 M).
- Distance between the RMU plinth and the Feeder Switch plinth should be (0.30 M).
- The width of the Feeders Switch plinth/s should be (0.65 M).
- Distance between the Feeder Switch plinth and TX plinth should not be less than (1.5 M).
- The width of the TX plinth should be (0.8 M).
- The set back of the TX plinth to the nearest wall should not be less than (1.5 M).
- All the plinths top levels should be ($+0.40$ M from the Road facing the S/STN which is assumed 0 level).
- The bottom level of all of the plinths should be at (-0.90 M) minimum from the assumed road 0 level.
- The total length of the plinth should not be less than (3.0 M) for RMU plinth+ Feeder Switch plinth, and (3.2 M) for TX plinth, with front set back not less than (0.80 M).
- The floor of S/STN room could be back-filled area, or concrete where a trench must be provided with size (0.8m width *1.5m depth).
- The height of the S/STN should not be less than (3.65 M) from the top of the Plinth.

- A separate door for the RMU+Feeder Switch beside the designated door for the TX is required.
- **The doors dimensions should be :**
 - RMU+Feeder Switch door dimensions should be (2.4 M X 2.6 M)
 - TX door dimensions should be (2.4 M x 2.6 M)
 - All the doors should be facing the main road.

General Notes:

- Crane and cable access to be available always.
- No services inside substation.
- In case of an M.V. room the finished floor level to be very smooth and the tolerance not to be more than ($\pm 3\text{mm}$) maximum.
- Contact Kahramaa's Civil Unit before starting the construction of substation, work without stage-wise inspection and approval will be rejected.
- Under taking of responsibility of the Structural design is to be submitted to KM at building Permit stage. Please refer to (Appendix 8)
- Elevation drawings to be submitted to KM before starting the construction of the substation.
- Substation rooms' height is (3.65m) minimum.
- Substation levels based on the front road level = ± 0.00 .
- M.V. room details to be designed & checked by the consultant.
- TX Plinth details to be designed & checked by the consultant (if the TX is dry type).
- Elevation of the substation must be matching with that of the main building (design, colour, etc.).

4.10.3 Substation in the Ground Level (I/D)

Load requires more than 1 TX.

- The required S/STN consists of :
6 High Voltage vacuum circuit breakers + 2 TX's

High Voltage Room:

- HV room size is (6m * 4.7m), for 6 VCBs and in case of any additional VCB's add (0.8 M) per VCB to the length.
- HV room height is (3.65m).
- HV room Trench size (0.8m width * 1.5m depth) along the 6m (Length of the H.V. room).
- Setback of the HV trench is (0.4m to 1.0m), depends on number of VCBs.
- HV room floor level is (+0.4m) from the facing road level.
- Two doors must be provided for the HV room (aluminium sandwich panel door). The main door size is (1.4m width * 2.6m high). The 2nd door (escape door) size is (1.2m width * 2.2m high). Both doors must lead to an open area.
- Natural ventilation opening size is (0.5m * 1.2m) aluminium louver with sand trap at high level, and it could be provided with cooling system.

Transformer Room:

- TX room size depends on number of transformers.
- TX plinth size is (0.8m*2.1m).
- TX plinth top level is (+0.4m) and the bottom level is (-0.9m) from the road level.
- Setback from the both side of the TX plinth to the nearest wall in parallel with the TX plinth should be not less than (1.5m).
- Setback from the nearest wall (opposite to the TX plinth) should not be less than (0.8m).

- Distance between the two transformer plinths is (1.0m) if they are in one line.
- Distance between the two transformer plinths is (2.6m) if they are in parallel.
- TX room could be open to sky or ceiled in the ceiled case the clear height shall be (3.65m).
- The floor of TX room could be back-filled area, or concrete where a trench must be provided with size (0.8m width *1.2m depth).
- Two doors must be provided for the TX room. The main door size is (1.0m * 2.2m) aluminium louver for (open to sky case) or (2.4m * 2.6m high) for ceiled case for each TX. The 2nd door must open to the MV room; the size is (1.0m * 2.2m) aluminium sandwich panel door. In case of any additional TX/s, a separate door for each TX should be provided.

General Notes:

- Crane and cable access to be available always.
- No services inside substation.
- HV room floor finish to be epoxy coated.
- Finished floor level to be very smooth and the tolerance not to be more than (± 3 mm) maximum.
- Contact Kahramaa's Civil Unit before starting the construction of substation, work without stage-wise inspection and approval will be rejected.
- Substation rooms' height is (3.65m) minimum.
- Under taking of responsibility of the Structural design is to be submitted to KM at building Permit stage. Please refer to (Appendix 8)
- Elevation drawings to be submitted to KM before starting the construction of the substation
- Substation levels based on the front road level = +/-0.00.
- MV room details to be designed & checked by the consultant.
- TX room details to be designed & checked by the consultant (if the TX is dry type).
- Elevation of the substation must be matching with that of the main building (design, colour, etc.).

4.10.4 Substation above the Ground Level(I/D)

- The required S/STN consists of :
6 High Voltage vacuum circuit breakers + 2 TX's

High Voltage Room

- HV room size is (6m * 4.7m), for 6 VCBs and in case of any additional VCB's add (0.8 M) per VCB to the length.
- HV room height is (3.65m).
- HV room Trench size (0.8m width * 1.5m depth) along the 6m (Length of the H.V. room).
- Setback of the HV trench is (0.4m to 1.0m), depends on number of VCBs.
- HV room floor level is (+0.2m) from the outside area facing to the HV room.
- Two doors must be provided for the HV room (aluminium sandwich panel doors). The main door size is (1.4m width * 2.6m high). The 2nd door (escape door) size is (1.2m width * 2.2m high). Both doors must lead to an open area.
- HV room must be air-conditioned.

Transformer Room:

- As per Kahramaa rules and regulations, any TX to be installed above the Ground level must be a Dry Type. It is the responsibility of the consultant to design the TX room while respecting the following:

- Provide one separate door for each Transformer (2.4m * 2.6m), aluminium sandwich panel .
- Provide one door from TX Room to MV Room (1.00m *2.2m), aluminium sandwich panel door.
- TX room floor level to be +(0.20 M) from outside area facing the TX room.
- Trench size to be (0.8m * 1.2m) in the TX room.
- Clear height to be (3.65m).
- The design of the Transformer Room shall comply with Kahramaa design rules and regulations.

General Notes:

- Crane, equipment and cable access to the substation to be always available.
- No services inside substation.
- HV room floor finish to be epoxy coated.
- Finished floor level to be very smooth and the tolerance not to be more than (± 3 mm) maximum.
- Contact Kahramaa's Civil Unit before starting the construction of substation, work without stage-wise inspection and approval will be rejected.
- MV room details to be designed & checked by the consultant.
- TX room details to be designed & checked by the consultant.
- Substation rooms' height is (3.65m) minimum.
- Under taking of responsibility of the Structural design is to be submitted to KM at building Permit stage. Please refer to (Appendix 8)
- Substation levels based on the level of the area in front of the substation = +/-0.00.
- Substation and transformer rooms must be provided with a cooling system and equipped with all necessary handling tools (i.e. cranes, forklift, trolleys, etc.).
- A complete fire hazards study shall be done by consultant whereby the consultant shall propose a suitable fire fighting system for the electrical substation and transformers rooms.
- Consultant shall provide "method statement" with the building permit application with a clear drawing showing method of delivery and replacement of the electric equipments in the substation i.e. transformers and HV switch gears.
- All works should be carried out under the supervision and instructions of Kahramaa.

4.10.5 Substation in the Basement Level (only in West Bay Towers Area)(I/D)

- The required S/STN consists of :
6 High Voltage vacuum circuit breakers + 2 TX's

High Voltage Room:

- HV room size is (6m * 4.7m), for 6 VCBs and in case of any additional VCB's add (0.8 M) per VCB to the length.
- HV room height is (3.65m).
- HV room Trench size (0.8m width * 1.5m depth) along the 6m (Length of the H.V. room).
- Setback of the HV trench is (0.4m to 1.0m), depends on number of VCBs.
- HV room floor level is (+0.2m) from the outside area facing to the HV room.
- Two doors must be provided for the HV room (aluminium sandwich panel doors). The main door size is (1.4m width * 2.6m high). The 2nd door (escape door) size is (1.2m width * 2.2m high). Both doors must lead to an open area.
- Natural ventilation opening size is (0.5m * 1.2m), aluminium louver with sand trap at high level, and it could be provided with cooling system.

Transformer Room:

- As per Kahramaa rules and regulations, any TX to be installed below the Ground level must be Dry Type. It is the responsibility of the consultant to design the TX room while respecting the following:
 - Provide one separate door for each Transformer (2.4m * 2.6m), aluminium (sandwich panel /louver) door.
 - Provide one door from TX room to MV room (1.00m * 2.2m), aluminium sandwich panel door.
 - TX room floor level to be (+0.20m) from outside area facing the TX room.
 - Trench size to be (0.8m * 1.2m) in the TX room.
 - Clear height to be (3.65m).
- The design of the Transformer Room shall comply with Kahramaa design rules and regulations.

General Notes:

- Crane, equipment and cable access to the substation must be available always.
- No services inside substation.
- HV room floor finish to be epoxy coated.
- Finished floor level to be very smooth and the tolerance not to be more than (± 3 mm) maximum.
- Contact Kahramaa's Civil Unit before starting the construction of substation, work without stage-wise inspection and approval will be rejected.
- MV room details to be designed & checked by the consultant.
- TX room details to be designed & checked by the consultant.
- Substation rooms' height is (3.65m) minimum.
- Under taking of responsibility of the Structural design is to be submitted to KM at building Permit stage. Please refer to (Appendix 8)
- Substation levels based on the level of the area in front of the substation = +/- 0.00. Substation location should not be below basement level 1.
- Consultant shall provide "method statement" with the building permit application with a clear drawing showing method of delivery and replacement of the electric equipments in the substation (i.e. transformers and HV switchgear).
- Provide direct access to the HV room from the ground floor through door and staircase with KM locks.
- If natural ventilation is not available substation must be provided with a cooling system .
- All S/STN should be equipped with all necessary handling tools (i.e. cranes, forklift, trolleys, etc.).
- A complete fire hazards study shall be done by consultant whereby the consultant shall propose a suitable fire fighting system for the electrical substation and transformers rooms.
- Consultant shall provide design concept and statement along with clear drawings for the drainage system design showing effective and complete protection for the substation from water flood.
- All works should be carried out under the supervision and instructions of Kahramaa.

4.10.6 General Civil Requirements

In case of the substation being located inside the building (above, in or below ground level) the Consultant has to undertake the Structural Design responsibility of the substation and to

make sure that this design is complying with the approved Architectural drawings, please refer to Appendix 8.

In case of construction of substation without Kahramaa supervision, an undertaking letter is to be represented to Kahramaa, please refer to appendix 10.

In case of construction of substation with consultant supervision, an undertaking letter is to be represented to Kahramaa, please refer to appendix 11.

Cable Trays:

- Cable trays shall comply with the following
 - Made of galvanized steel.
 - Suitable strength and rigidity.
 - Side rails or equivalent structural members.
- Cable trays should not have any sharp edges, burrs or projections that could damage the cables.
- Cable trays shall be corrosion resistance but if not the system should be protected from corrosion.
- Cable trays shall include fitting for changes in direction and election of runs.
- Cable trays should be protected from any physical damage and additional protection should be provided wherever required.
- Cable trays specifications should be in compliance with QCS.

4.11 Network Existing Inside Plots

In some cases an existing electricity network cable(s) is found passing through the plot of a BP, which will be studied as per procedure requiring the information detailed above. The BP shall be approved for procedure purposes provided it meets all Kahramaa requirements and the necessary undertaking signed by the applicant towards bearing all cost associated with the diversion; and not to start any construction prior to such diversion and written clearance from KAHRAMAA. It is the responsibility of the consultant to inform the applicant as above and secure this undertaking Please refer to appendix no 5.

In case of EHV network passing inside the plot, special conditions will apply.

4.12 Safety Requirements

- In case of the usage of oil type transformer the following instructions are to be complied with:
 - Transformer Room shall be located where the equipment inside can be naturally ventilated.
 - The walls, floors and roof of the TX room shall be constructed of material that have adequate structure strength for the load imposed there on, with a minimum fire resistance of 3 hours, in a case where the TX room is protected by an automatic sprinklers, water sprays, Carbon-dioxide or Halon protection system that is approved by Kahramaa .
 - Transformer room doors shall be provided with a tight fitting door that has a minimum that have a minimum fire rating of 3 hours with and 1 hour if the TX/s is protected with automatic sprinkles, water sprays, Carbon Dioxide or Halon.
 - Ventilation opening shall be located as far as possible from doors, fire escape windows and combustible materials. And the area of it shall not be less than (3.00 Sq.M) per 1000 K.V.A.

- All cable Ducts/opening shall be sealed with fire resistance material.
- Clear emergency escape signs should be installed in the S/STN and shows the escape path, these signs shall be connected to an emergency lighting system inside the building to HV/TX room and exit signs all the way to outside the building.
- Refer to Appendix 9 and comply with it.
- All the above should be in compliance with QCS standards and specifications.
-

5. Appendices

| | |
|-------------|---|
| Appendix 1 | EN-DP-P1/F4 – Provision of Substation Undertaking |
| Appendix 2 | EN-DP-P1/F5 – Compound Agreement Undertaking |
| Appendix 3 | EN-DP-P1/F7 – Substation Above Ground Undertaking |
| Appendix 4 | EN-DP-P1/F8 – Substation in Basement Undertaking |
| Appendix 5 | EN-DP-P1/F9 – Cable Diversion Undertaking |
| Appendix 6 | EN-DP-P1/F10 – Infrastructure undertaking |
| Appendix 7 | EN-DP-P1/F6 – Transformer Undertaking |
| Appendix 8 | EN-DP-C1/F1 –Structural Design Undertaking |
| Appendix 9 | EN-DP-C1/F2 – Cautionary Signs |
| Appendix 10 | EN-DP-C1/F3 –S/STN Built without KM supervision undertaking |
| Appendix 11 | EN-DP-C1/F4 –Consultant Supervision of Construction Undertaking |
| Appendix 12 | EN-DP-C1/F5 –NOC for M.D. below 700 Amps |
| Appendix 13 | EN-DP-C1/F6 –NOC Below 5 M.W. |



Electricity Networks Affairs
شؤون شبكات الكهرباء

INSTALLATION OF THE ELECTRIC SUBSTATION IN THE BASEMENT FLOOR (Transformers and HV switchgear)

I / WE THE UNDER SIGNED THE OWNER OF THE TOWER IN THE WEST BAY AREA AS PER YOUR DEPARTMENTS B.P. NO.----- AGREE TO COMPLY WITH THE CONDITIONS STATED BELOW :-

- 1- The owner will provide all the materials required for the HV & MV system including but not limited to, (11KV) electric network within the project premises such as HV panels, TX's , single core cables from the TX to the MV panel, all cables HV & MV as required.
- 2- All the materials should be as per KM specifications and to be approved by KM before placing procurement order and as specified and approved in the building permit application by KM.
- 3- Owner will be responsible for full maintenance/ replacement of all of the above materials in case of any is required.
- 4- Transformer in the basement floor should be Dry type;
- 5- The owner must appoint an ENA approved contractor to carry out all the electric works inside the project premises which include all the cable installation and terminations, including but not no limited to, the cable loops between HV switchgear and transformer and from transformer to consumer LV panel.
- 6- The contractor will be required to prepare (as laid) drawings and transfer these to our main records prior to our cables being (live) and as per KM GIS section requirements.
- 7- The contractor should install the HV cables from the substation up to outside the project premises (a point approved by KM) where the KM will join the cable to their network (pickup point).
- 8- No joint of HV cables allowed inside the premises.
- 9- Operation of HV panel by KM and the ,maintenance by the owner (to be carried out by KM approved contractor)

10- SUBSTATION LOCATION AND REQRIMENTS

- A- Substation location should not be below basement level 1.
- B- Clear vehicles access within the basement to the substation must be provided and the owner will undertake granting KM personnel 24 hours full access to the substation.



Electricity Networks Affairs

شؤون شبكات الكهرباء

- C- Consultant should provide “method statement” with the building permit application with a clear drawing showing method of delivery and replacement of the electric equipments in the substation i.e. transformers and HV switch gears.
- D- provide direct access to the HV room from the ground floor through door and staircase with KM locks.
- E- Substation must be provided with a cooling system and equipped with all necessary handling tools i.e. cranes, forklift, trolleys...etc
- F- A complete fire hazardous study to be done by consultant where consultant should propose suitable fire fighting system for the electrical substation and transformers rooms.
- G- A complete health , safety and environmental assessment for the impact of electrical equipment and transformers locations to be done by consultant where consultant should propose optimum locations/equipment specification to minimize its impact (EMF,EMC, noise level...etc) to the lowest possible limit and as permitted by KM and/or international standard
- H- Consultant should provide a clear drawing and design for the substation earthing ,earthing rods and substation earth to the transformers. The consultant & contractor are responsible for calculating and providing the required earth impedance to provide effective earthing at the transformer side and submit such calculation along with the B.P.
- I- Consultant should provide design concept and statement along with a clear drawings for the drainage system design showing effective and complete protection for the substation from water flood

All works should be carried out under the supervision and instructions of ENA and KM engineers.

Despite the above requirements the owner is still obliged to pay the connection fees in accordance with the law.

The Consultant shall be responsible to explain all the above requirements and conditions to the owner, and KM will not be held responsible for any misunderstanding.

Consultant
(stamp & signature)

Owner
(stamp & signature)

Electricity Networks Affairs

شؤون شبكات الكهرباء

Substation Above Ground Level Undertaking

EN-DP-P1/F7

**INSTALLATION OF THE ELECTRIC TRANSFORMERS
ABOVE GROUND LEVEL**

I / WE THE UNDER SIGNED THE OWNER OF THE TOWER IN THE WEST BAY AREA AS PER YOUR DEPARTMENTS B.P. NO.----- AGREE TO COMPLY WITH THE CONDITIONS STATED BELOW :-

- 1- The owner will provide all the materials required including but not limited to, HV loop, TXs , single core cables from the TXs to the MV panels, all cables HV &MV required within the project premises.
- 2- All the materials should be as per KM specifications and to be approved by KM before placing procurement order and as specified and approved in the building permit application by KM.
- 3- Owner will be responsible for maintenance/replacement of all the above materials in case of any is required.
- 4- The Consultant should submit to KM , along with the Building Permit application, a method statement supported by drawings explaining the procedure for replacing and maintaining of the HV equipment (cables and TXs) in project premises.
- 5- Owner should provide a short term solution for restoring supply in case of TX failure thus could be achieved through spare transformer or any other alternative. Spare HV loop to be provided.
- 6- TXs above the ground must be Dry type.
- 7- The owner must appoint an ENA approved contractor to carry out all the electric works inside the project premises which includes all the cable installation and terminations, the cable loops between HV switchgear and transformer and from transformer to MV panel.
- 8- The contractor will be required to prepare (as laid) drawings and transfer these to our main records prior to our cables being (live) and as per KM GIS section requirements.
- 9- No joint of HV cables allowed inside the premises.
- 10- O&M responsibility of Transformers is by owner & must be carried out by KM approved contractor.
12. Substation and Transformer room must be provided with a cooling system and equipped with all necessary handling tools i.e. cranes, forklift, trolleys...etc
13. A complete fire hazardous study to be done by consultant where consultant should propose suitable fire fighting system for the electrical substation and transformers rooms.
14. A complete health , safety and environmental assessment for the impact of electrical equipment and transformers locations to be done by consultant where

Electricity Networks Affairs

شؤون شبكات الكهرباء

Substation Above Ground Level Undertaking

EN-DP-P1/F7

consultant should propose optimum locations/equipment specification to minimize its impact (EMF,EMC, noise level...etc) to the lowest possible limit and as permitted by KM and/or international standard

15. Consultant should provide a clear drawing and design for the substation earthing ,earthing rods and substation earth to the transformers. The consultant & contractor are responsible for calculating and providing the required earth impedance to provide effective earthing at the transformer side and submit such calculation along with the B.P.

All works should be carried out under the supervision and instructions of ENA and KM engineers.

Despite the above requirements the owner is still obliged to pay the connection fees in accordance with the law.

The Consultant shall be responsible to explain all the above requirements and conditions to the owner, and KM will not be held responsible for any misunderstanding.

Consultant (witness)
(stamp & signature)

Owner
(stamp & signature)



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs
شؤون شبكات الكهرباء

The Director
Electricity Networks Affairs
Qatar General Electricity & Water Corporation
Post Box-41
Doha - Qatar.

Dear Sir,

PROCUREMENT OF TRANSFORMER

Building Permit No: رقم رخصة البناء:
Applicants Name: اسم مقدم الطلب:

I/We* agree to provide the transformer/transformers* for the project of the above mentioned building permit in accordance with Kahramaa specifications. أوافق/نوافق* على شراء المحول/المحولات* الخاصة بمشروع رخصة البناء أعلاه على حسابي/حسابنا* طبقاً لمواصفات كهرباء..

*I/We are responsible for the installation and maintenance of dry type transformers, and for the replacement of such transformers in case of their failure. *وحيث أن هذه المحولات من النوع الجاف سوف أكون مسؤول عن تركيبها وصيانتها وكذلك الاستبدال في حالة أي أعطال في هذه المحولات.

It is understood that Kahramaa reserve the right to use the transformer/transformers* to supply electricity to other customers. However the owner of the land on which the transformer/transformers* is/are situated will have the priority of their use for supply of electricity to his/their existing and future building/s if it is technically possible to do so. لكهرباء الحق في استغلال المحول/المحولات* الكهربائية لإمداد مشتركين آخرين بالتيار الكهربائي وتكون الأولوية لصاحب الأرض المقام عليها المحول/المحولات* الكهربائية في توصيل التيار الكهربائي إلى مبناه/مبانيه التي يقوم صاحب الأرض بإنشائه/بإنشائها مستقبلًا والمجاورة للمحول/المحولات* الكهربائية إذا توافقت مع الاشتراطات الفنية المنظمة للعمل.

I/We* understand and agree to the conditions given above. أوافق/نوافق* على الشروط المذكورة أعلاه.

Witness (Consultant Stamp & Signature)

الشاهد (ختم وتوقيع الاستشاري)

Signature of Owner

توقيع المالك

* Delete as appropriate.
Copy of owner's ID to be attached

* ضع علامة على ما يتناسب معك.
يجب إرفاق نسخة من بطاقة المالك



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs

شؤون شبكات الكهرباء

**The Director
Electricity Networks Affairs
Qatar General Electricity & Water Corporation
Post Box-41
Doha - Qatar.**

Dear Sir,

POWER SUPPLY TO COMPOUNDS

I/We* the undersigned the owner of the compound as per Kahramaa Building Permit No:..... agree to comply with the conditions stated below:

1. The owner must appoint an ENA approved contractor to carry out excavation, cable laying & jointing of HV distribution cables inside the compound. This will also include the cable loops between HV switchgear and transformer and transformer to consumer's panel.
2. The contractor will be required to collect the materials from the stores and deliver to the site.
3. The contractor will be responsible for backfilling, reinstatement, provision of cable tiles/marker tapes and approved backfilling materials and all road-crossing ducts.
4. The contractor will be required to prepare 'As Laid' drawings and transfer these to our mains records prior to our cables being 'Live'.
5. ENA will be responsible for plant delivery and installation including the earth-bore and substation earthing.
6. The owner will be responsible for substation site allocation and for all substation civil works including arrangement of local supply to the substation.
7. HV distribution materials including 11kV cables, joints, high voltage switchgear, but excluding the transformers will be issued by Kahramaa.
8. All works should be carried out under the supervision and instructions of ENA.
9. Despite the above requirements the owner shall still be obliged to pay the connection fees in accordance with the law.
10. Reinstatement within the compound which may be required after HV cable maintenance/repair by ENA, will be done by the owner.
11. Protection of the HV cables inside the compound during any future construction is the responsibility of the owner. The owner is expected to obtain the relevant records from ENA before commencing such work.

Witness (Consultant Stamp & Signature)

Signature of Owner



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs
شؤون شبكات الكهرباء

The Director
Electricity Networks Affairs
Qatar General Electricity & Water Corporation
Post Box-41
Doha - Qatar.

Dear Sir,

PROVISION OF SUBSTATION AGREEMENT

Building Permit No: رقم رخصة البناء:
Applicants Name: اسم مقدم الطلب:

I/We* agree to provide substation site/s* in accordance with the details in the drawings approved by Kahramaa's Civil Unit. أوافق/نوافق* على تخصيص موقع/مواقع* لمحطة/محطات كهرباء طبقاً للمواصفات الموضحة في اللوحات المعتمدة من قبل الوحدة المدنية بكهرماء.

The substation/substations* shall be built by me/us* at my/our* cost and to a design provided by Kahramaa. The Kahramaa representative will inspect the construction for approval. يتم إنشاء الأعمال المدنية لمحطة/محطات* الكهرباء بواسطة/بواسطة* وعلى نفقتي/نفقتنا* الخاصة وطبقاً لمواصفات كهرماء ، وسوف يقوم مندوب كهرماء بمعاينة الإنشاءات لاعتمادها والموافقة عليها.

It is understood that Kahramaa reserve the right to use the substation to supply electricity to other customers. However the owner of the land on which the substation/s is/are situated will have a priority use of the substation/s for supply of electricity to his/their building/s. This will also apply to future buildings of the owner in the near vicinity of the substation/s if it is technically possible to do so. لكهرماء الحق في استغلال المحطة الكهربائية لإمداد مشتركين آخرين بالتيار الكهربائي وتكون الأولوية لصاحب الأرض المقام عليها المحطة/ المحطات الكهربائية في توصيل التيار الكهربائي إلى مبناه/مبانيه التي يقوم صاحب الأرض بإنشائه/بإنشائها مستقبلاً والمجاورة للمحطة/للمحطات الكهربائية إذا توافقت مع الاشتراطات الفنية المنظمة للعمل.

I/We* understand and agree to the conditions given above. أوافق/نوافق* على الشروط المذكورة أعلاه.

Witness (Consultant Stamp & Signature)

الشاهد (ختم وتوقيع الاستشاري)

Signature of Owner

توقيع المالك

* Delete as appropriate.
Copy of owner's ID to be attached

* ضع علامة على ما يتناسب معك.
يجب إرفاق نسخة من بطاقة المالك



Electricity Network Affairs
HIGH VOLTAGE ELECTRICAL LOAD DEMAND NOTIFICATION N.O.C.
SUBSTATION LOCATION & LAYOUT

NOC No: _____ Rev: _____

TO BE FILLED BY CUSTOMER REPRESENTATIVE/CONSULTANT

Approval Re-Approval Date: _____

| | | |
|----------------|---------------|---------|
| Area Name: | Zone No: | PIN No: |
| Owner Name: | Owner ID No: | |
| Project Title: | Project Type: | |

We hereby confirm that as per the provisional design, the connected load details are as follows:

| | A/C | W/H | General | Other | Total |
|-------------------|-----|-----|---------|-------|-------|
| Existing (if any) | | | | | |
| New | | | | | |
| Total | | | | | |
| Future (if any) | | | | | |

Number of Substations: _____ **Project completion date:** _____

| | |
|--|--|
| Enclosed are 3 copies of: 1. Policy Plan (Grid + PIN) 2. Site Development Plan | Consultant: _____ Contact Person: _____ Designation: _____ Tel/Fax: _____ Email: _____ |
|--|--|

FOR OFFICIAL USE ONLY

FOR THE GIVEN CONNECTED LOAD, THE REQUIREMENTS SHALL BE AS FOLLOWS:

| |
|---|
| <input type="checkbox"/> REJECTED For the following reasons: <input type="checkbox"/> 1-Existing Network Inside Plot. Diversion under scheme No. 24/...../..... <input type="checkbox"/> 2-Insufficient Data Provided by Consultant. <input type="checkbox"/> 3-Other Reasons (please specify) |
| <input type="checkbox"/> APPROVED Supply will be under scheme no/...../..... I/D <input type="checkbox"/> No. of I/D S/S..... O/D <input type="checkbox"/> No. of O/D S/S.... <input type="checkbox"/> Other Requirements (please specify): |

THE FOLLOWING CONDITIONS SHALL APPLY:

- KAHRAMAA reserves the right to require modifications at time of BP.
- Changes to S/S layout by applicant at BP stage without re-approval or in coordination with the ENA Civil Unit shall make the initial KAHRAMAA approval null and void.
- For any load increase that will affect the number of transformers required, the applicant shall submit a revision of the NOC for approval by KAHRAMAA
- NOC approval does not constitute a BP approval.



Electricity Network Affairs
LOW VOLTAGE ELECTRICAL LOAD DEMAND NOTIFICATION N.O.C.
MAXIMUM DEMAND BELOW 700 AMPS

NOC No: _____ Rev: _____

TO BE FILLED BY CUSTOMER REPRESENTATIVE/CONSULTANT

Approval Re-Approval Date: _____

| | | |
|----------------|---------------|---------|
| Area Name: | Zone No: | PIN No: |
| Owner Name: | Owner ID No: | |
| Project Title: | Project Type: | |

We hereby confirm that as per the provisional design, the connected load details are as follows:

| | A/C | W/H | General | Other | Total |
|-------------------|-----|-----|---------|-------|-------|
| Existing (if any) | | | | | |
| New | | | | | |
| Total | | | | | |
| Future (if any) | | | | | |

Number of Substations: _____ **Project completion date:** _____

| | |
|--|--|
| Enclosed are 3 copies of: 1. Policy Plan (Grid + PIN) 2. Site Development Plan | Consultant: _____ Contact Person: _____ Designation: _____ Tel/Fax: _____ Email: _____ |
|--|--|

FOR OFFICIAL USE ONLY

FOR THE GIVEN CONNECTED LOAD, THE REQUIREMENTS SHALL BE AS FOLLOWS:

| |
|--|
| <input type="checkbox"/> REJECTED For the following reasons: <input type="checkbox"/> 1-Existing Network Inside Plot. Diversion under scheme No. 24/...../..... <input type="checkbox"/> 2-Insufficient Data Provided by Consultant. <input type="checkbox"/> 3-Other Reasons (please specify) |
| <input type="checkbox"/> APPROVED Method of Connection: <input type="checkbox"/> S/C <input type="checkbox"/> MSB <input type="checkbox"/> E/R Direction of Supply: <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W Number of Connections: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Other:..... <input type="checkbox"/> Other Requirements (please specify): |

THE FOLLOWING CONDITIONS SHALL APPLY:

- KAHRAMAA reserves the right to require modifications at time of BP.
- Changes to electrical layout shall make the initial KAHRAMAA approval null and void.
- For any load increase that will affect increase the maximum demand beyond 700 Amps, the applicant shall submit a revision of the NOC for approval by KAHRAMAA.
- NOC approval does not constitute a BP approval.

!Error



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs

شؤون شبكات الكهرباء

Consultant Supervision of Construction EN-DP-C1/F4

بسم الله الرحمن الرحيم

تعهد

مقدم الى : السيد / مدير شؤون شبكات الكهرباء المحترم
المؤسسة العامة القطرية للكهرباء والماء .

أتعهد أنا الموقع أدناه : المكتب الاستشاري / - ترخيص رقم ..
صادر بتاريخ / / - المسند اليه ، طبقاً للعقد المبرم مع
السيد/..... (المالك) ، مسئولية الإشراف على عملية بناء محطة
الكهرباء الخاصة بـ :-

اسم المشروع:

المنطقة :

ملك السيد :

رخصة بناء رقم

بأن أقوم بأعمال الإشراف على جميع مراحل عملية البناء لمحطة
الكهرباء الخاصة بالمشروع أعلاه ، ملتزماً بالشروط التالية :-

- ١ - إخطار كهرباء قبل شروع في عملية البناء ، والإلتزام التام بالمخططات
التي سبق أن إعتدتها ووافقت عليها كهرباء ، وعدم إجراء أي تعديل /
أو تغيير عليها ، إلا بعد الحصول على موافقة كتابية من كهرباء - قبل
البدء في عملية التنفيذ - وبشرط وجود ضرورة تقتضى ذلك .
- ٢ - الإلتزام بالشروط المعمارية والمواصفات الفنية لمبنى المحطة ، طبقاً
للأوضاع المحددة فى الترخيص ، وبمراعاة القواعد المنصوص عليها فى
القانون رقم (٤) لسنة ١٩٨٥م بشأن تنظيم المباني وتعديلاته ولإحتته
التنفيذية والقرارات المنفذة له.

Electricity Networks Affairs

شؤون شبكات الكهرباء

Consultant Supervision of Construction EN-DP-C1/F4

- ٣ - إعداد وتقديم برنامج زمني - تفصيلي - لكهرماء ، يشتمل على جميع مراحل عملية تنفيذ المحطة والالتزام الكامل به ، وإخطار كهرماء في حال أي تغيير في هذا البرنامج ليتسنى للمختصين لديها المتابعة .
- ٤ - إتخاذ الإجراءات والإحتياطات اللازمة لسلامة العمل والعمال والمارة والمباني المجاورة ومنشآت المرافق العامة التي قد تكون موجودة بموقع العمل .
- ٥ - ضمان سلامة جميع الأعمال الهندسية المعمارية والإنشائية للمحطة وتحمل كامل المسؤولية عن أي أضرار تحدث في المحطة لمدة خمس سنوات من تاريخ التسليم النهائي للمحطة لكهرماء .
- ٦ - إزالة وتغيير أي أعمال لا تتطابق مع المواصفات والمخططات المعتمدة من كهرماء ، ولكهرماء الحق في عدم التوصيل إذا كانت الأعمال غير مطابقة لشروط الترخيص أو للمقاييس والمواصفات والقواعد المنظمة لأعمال توصيل الخدمة .
- ٧ - التنسيق مع كهرماء في مرحلتي القواعد والأسقف للتأكد من صحة ومطابقة المناسيب قبل عملية صب الخرسانات .
- ٨ - تسليم المرحلة النهائية للمحطة لكهرماء وأخذ الموافقة على ذلك بالتنسيق مع المختصين .





المالك

الاستشاري (الشاهد)

Electricity Networks Affairs

شؤون شبكات الكهرباء

Cautionary Signs EN-DP-C1/F2

| | |
|---|--|
|  | <p>Sign 1: High Voltage Danger. This sign must be installed at all accessible sides to the S/S and be clearly visible to the public.</p> |
|  | <p>Sign 2: Keep Clear Caution. This sign must be placed at all entrances required for accessibility to the S/S.</p> |
|  | <p>Sign 3: Exit Sign. This sign must be placed at all exits from inside the S/S leading all the way to the outside of the premises. The sign must be lit and connected to the emergency lighting system.</p> |
|  | <p>Sign 4: Escape Door Clearance. This sign must be placed at all escape doors and be clearly visible to the public from outside the S/S.</p> |



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs
شؤون شبكات الكهرباء

The Director
Electricity Network Affairs
Kahramaa
Post Box # 41
Doha - Qatar.

Date.....

Letter of Undertaking

I, the undersigned owner of **BP No.**_____ for the plot bearing **Pin Number** _____ hereby declare that I am aware of existence of Kahramaa HV /LV cables/OHL in my plot **and will not commence any construction activity until the same being diverted.**

I further confirm my acceptance to bear all associated cost towards the diversion of cables under the scope of work in **Scheme No.** _____, upon receipt of cost advice from Kahramaa.

Name of the applicant:-

ID number:

Tel:

Fax:

Email:

Yours faithfully

(Signature)

❖ *Attach I.D copy of the Applicant*



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs

شؤون شبكات الكهرباء

بسم الله الرحمن الرحيم

تعد

المحترم
مقدم إلى: السيد / مدير شؤون شبكات الكهرباء
المؤسسة العامة القطرية للكهرباء والماء

أتعهد أنا الموقع أدناه : المكتب الاستشاري
ترخيص رقم صادر بتاريخ / / المسند إليه أعمال
تصميم المشروع المبين أدناه وذلك طبقاً للعقد المبرم مع
السيد / (المالك)

اسم المشروع :
المنطقة :
ملك السيد/السادة :
رخصة بناء/مشروع رقم:

أتعهد بضمان سلامة التصاميم الإنشائية للمحطات الكهربائية التي توجد ضمن
هذا المشروع وتحمل كامل المسؤولية الناتجة عن ذلك كما أتعهد بعدم تعارض
هذه التصاميم مع المخططات المعمارية الموافق عليها مسبقاً من كهرباء ماء مع
مراعاة الاحتفاظ بحق كهرباء ماء بإجراء أي تعديل على هذه المخططات الإنشائية
في حالة عدم موافقتها لمتطلبات كهرباء ماء أو تعارضها مع المخططات المعمارية
المعتمدة سابقاً من كهرباء ماء .

المالك

الاستشاري

التاريخ :



المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

Electricity Networks Affairs
شؤون شبكات الكهرباء

The Director
Electricity Network Affairs
Kahramaa
Post Box # 41
Doha - Qatar.

Date.....

Letter of Undertaking

I, the undersigned owner of **BP No.**_____ for the plot bearing **Pin Number** _____ hereby declare that I am aware of existence of Kahramaa HV /LV cables/OHL in my plot **and will not commence any construction activity until the same being diverted.**

I further confirm my acceptance to bear all associated cost towards the diversion of cables under the scope of work in **Scheme No.** _____, upon receipt of cost advice from Kahramaa.

Name of the applicant:-

ID number:

Tel:

Fax:

Email:

Yours faithfully

(Signature)

❖ *Attach I.D copy of the Applicant*

Electricity Networks Affairs

شؤون شبكات الكهرباء

S/STN Built Without Kahramaa Supervision EN-DP-C1/F3

بسم الله الرحمن الرحيم

تعهد

مقدم الي : السيد / مدير شؤون شبكات الكهرباء
المؤسسة العامة القطرية للكهرباء والماء .
المحترم

أقر أنا الموقع أدناه بأنني المقاول المسؤول عن بناء محطة الكهرباء
الخاصة بمشروع /
في منطقة /
ملك السيد /
رخصة بناء رقم

مخالفاً بذلك التعليمات الموضحة في المخططات المختومة من كهرماء حيث لم يتم الرجوع
للمختصين في كهرماء للإشراف على مراحل البناء.
وبناء عليه فإنني أتعهد بما يلي:

أولاً : إزالة وتغيير أي أعمال لا تتطابق مع المواصفات والمخططات المختومة.
ثانياً : ضمان جميع الأعمال الهندسية المعمارية والإنشائية للمحطة المذكورة أعلاه وتحمل
كامل المسؤولية عن أي أضرار تحدث في المحطة لمدة خمس سنوات من تاريخ تسليم
المحطة لكهرماء.

ثالثاً : عدم القيام ببناء أي محطة كهرباء لأي مشروع مستقبلاً بدون الرجوع للمختصين في
كهرماء للإشراف على ذلك.

رابعاً: اعتبار هذا التعهد بمثابة إنذار موجه من كهرماء لشركتنا وفي حالة تكرار ذلك يحق
لكهرماء عدم السماح لشركتنا القيام ببناء أي محطة كهرباء في المستقبل وعليه أوقع.

المالك

الاستشاري(الشاهد)

المقاول

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