

**15 -ാം കേരള നിയമസഭ**

**16 -ാം സമ്മേളനം**

**നക്ഷത്ര ചിഹ്നം ഇല്ലാത്ത ചോദ്യം നം. 2555**

**23-02-2026 - ൽ മറുപടിയ്ക്ക്**

**വൈപ്പിൻ മണ്ഡലത്തിൽ വൈദ്യുതി വകുപ്പ് നടപ്പിലാക്കിയ പ്രവൃത്തികൾ**

| ചോദ്യം                           |                                                                                                                                    | ഉത്തരം                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ശ്രീ കെ.എൻ. ഉണ്ണിക്കൃഷ്ണൻ</b> |                                                                                                                                    | <b>ശ്രീ. കെ . കൃഷ്ണൻകുട്ടി<br/>(വൈദ്യുതി വകുപ്പ് മന്ത്രി)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| (എ)                              | ഈ സർക്കാർ അധികാരത്തിൽ വന്നശേഷം വൈദ്യുതി വകുപ്പ് മുഖാന്തിരം വൈപ്പിൻ മണ്ഡലത്തിൽ നടപ്പിലാക്കിയ പ്രവൃത്തികളുടെ വിശദവിവരം ലഭ്യമാക്കുമോ; | (എ)                                                           | <p><b>കെ.എസ്.ഇ.ബി.എൽ.</b></p> <p>ഈ സർക്കാർ അധികാരത്തിൽ വന്നതിനു ശേഷം വൈദ്യുതി വകുപ്പ് മുഖാന്തിരം വൈപ്പിൻ മണ്ഡലത്തിലെ മട്ടാഞ്ചേരി ഡിവിഷൻ കീഴിലെ വൈപ്പിൻ, ഞാറക്കൽ സെക്ഷനുകളിൽ 8,09,14,972/- രൂപയുടെ ദൃതി വർക്കുകൾ പൂർത്തീകരിച്ചു. 22,71,183/- രൂപയുടെ ദൃതി വർക്കുകൾ പുരോഗമിക്കുന്നു. 36,27,171/- രൂപയുടെ തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ നടപ്പിലാക്കുന്ന പദ്ധതികളിൽ ഉൾപ്പെടുത്തി പിപിഎസ്സ് വർക്കുകളും പൂർത്തീകരിച്ചു. വൈപ്പിൻ, ഞാറക്കൽ സെക്ഷനുകളിലെ RDSS പദ്ധതിയിൽ ഉൾപ്പെടുത്തി 2,65,43,773/- രൂപയുടെ 20.55 കി.മീ. LT ലൈൻ സ്ഥാപിക്കുന്നതും, 9.01 കി.മീ 11കെ.വി. ലൈൻ ABC ആക്കുന്ന പ്രവൃത്തിയും പുരോഗമിച്ചുവരുന്നു.</p> <p>വൈപ്പിൻ മണ്ഡലത്തിലെ മട്ടാഞ്ചേരി ഡിവിഷൻ കീഴിൽ വൈപ്പിൻ, ഞാറക്കൽ സെക്ഷനുകളിൽ ദൃതി വർക്കിൽ ഉൾപ്പെടുത്തി 3.55 കി.മീ പുതിയ HT ABC ലൈനുകൾ. വലിക്കുന്നതിന് 6,37,07,337/- രൂപയുടെ പ്രവൃത്തിയും പഴയ UG കേബിൾ മാറ്റി പുതിയ കേബിൾ സ്ഥാപിച്ച വകയിൽ 33,60,739/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. LT ലൈൻ റിക്കണ്ടുകൂർ ചെയ്ല വകയിൽ 92,44,922/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. ലൈൻ വലിച്ച് പുതിയ ട്രാൻസ്ഫോർമർ സ്ഥാപിച്ചതിന് 30,31,725/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. ട്രാൻസ്ഫോർമറിന്റെ ശേഷി വർദ്ധിപ്പിക്കുന്നതിനായി 15,70,249/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. 36,27,171/- രൂപയുടെ തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ നടപ്പിലാക്കുന്ന പദ്ധതികളിൽ ഉൾപ്പെടുത്തി പിപിഎസ്സ് വർക്കുകളിൽ 2.8 കി.മീ. LT ABC, 6 കി.മീ. 2 wire LT ലൈൻ, 8.1 കി.മീ. LT അഡീഷണൽ കണ്ടക്ടർ എന്നിവ വലിക്കുന്ന ജോലികളും പൂർത്തീകരിച്ചിട്ടുണ്ട്.</p> <p>കൂടാതെ RDSS പദ്ധതിയിൽ ഉൾപ്പെടുത്തി 20.55 കി.മീ. LT ലൈൻ സ്ഥാപിക്കുന്നതും, 9.01 കി.മീ 11 കെ.വി. ലൈനും ABC ആക്കുന്ന 2,65,43,773/- രൂപയുടെ പ്രവൃത്തിയും പുരോഗമിക്കുന്നു. ദൃതി പദ്ധതിയിൽ 22,71,183/- രൂപയുടെ 4 ട്രാൻസ്ഫോർമറുകളുടെ ശേഷി ഉയർത്തുന്ന ജോലിയും പുരോഗമിക്കുന്നു.</p> <p>വൈപ്പിൻ നിയോജക മണ്ഡലത്തിൽ, സൗര ഫേസ് 1 പദ്ധതിയിൽ ഉൾപ്പെടുത്തി 30 kW സ്ഥാപിതശേഷിയിൽ 5 പുരപ്പുറ സൗരോർജ്ജ</p> |

നിലയങ്ങൾ സ്ഥാപിച്ചിട്ടുണ്ട്.

പദ്ധതിക്ക് വേണ്ടി ആകെ 13,50,000/- രൂപ ചെലവാക്കിയിട്ടുണ്ട്. എല്ലാ പദ്ധതികളും പൂർത്തീകരിച്ചിട്ടുണ്ട്.

വൈപ്പിൻ നിയോജക മണ്ഡലത്തിൽ വൈദ്യുതിവകുപ്പ് മുഖേന 6 പോൾ മാണ്ടഡ് ചാർജിംഗ് സ്റ്റേഷനുകൾ സ്ഥാപിച്ചിട്ടുണ്ട്. പദ്ധതിയുടെ വിശദാംശങ്ങളും ചെലവഴിച്ച തുകയും **അനുബന്ധം-1** ആയി ചേർത്തിട്ടുണ്ട്. പ്രവൃത്തി പൂർത്തീകരിച്ചിട്ടുണ്ട്.

ഉത്തരവുകളുടെ പകർപ്പ് **അനുബന്ധം-2** ആയി ചേർത്തിട്ടുണ്ട്.

പ്രസരണ വിഭാഗത്തിനു കീഴിൽ വൈപ്പിൻ മണ്ഡലത്തിൽ 66 kV ഞാറയ്ക്കൽ സബ്സ്റ്റേഷന്റെ ശേഷി 110 kV നിലവാരത്തിലേക്ക് ഉയർത്തുന്ന പ്രവൃത്തിയും, ഇതുമായി ബന്ധപ്പെട്ട് ചെറായി - ഞാറയ്ക്കൽ 110 kV ലൈനിന്റെ നിർമ്മാണവും നടന്നു വരുന്നു.

ചെറായി - ഞാറയ്ക്കൽ 110 kV ലൈൻ നിർമ്മാണ പ്രവൃത്തിയുടെ ഭാഗമായി മൊത്തം 49 ട്രാൻസ്മിഷൻ ലൈൻ ടവറുകൾ നിർമ്മിക്കേണ്ടതിൽ ഇതുവരെ 28 ടവർ ഫൗണ്ടേഷനുകളുടെ നിർമ്മാണം പൂർത്തിയായി. 21 ടവറുകൾ സ്ഥാപിച്ചു. ലൈനിന്റെ 48 ടവർ ലോക്കേഷനുകളും ചെമ്മീൻ കെട്ടുകളിലൂടെയാണ് കടന്നുപോകുന്നത് എന്നതിനാൽ വർഷത്തിൽ 5 മാസം മാത്രമേ പ്രവൃത്തികൾ നടത്തുവാൻ സാധിക്കുകയുള്ളൂ. കൂടാതെ കടലിനോട് അടുത്തുള്ള സ്ഥലം ആയതിനാൽ വേലിയേറ്റം മൂലമുള്ള ബുദ്ധിമുട്ടുകളും ടവർ ഫൗണ്ടേഷൻ നിർമ്മാണത്തിന് തടസ്സമായുണ്ട്. ഭൂവുടമകളിൽ നിന്നുള്ള എതിർപ്പുകളും പദ്ധതിയുടെ കാലതാമസത്തിന് കാരണമാണ്. മൂന്ന് ഹർജികൾ എറണാകുളം എ.ഡി.എമ്മിന് മുമ്പാകെ തീർപ്പാക്കലിനായി നിലവിലുണ്ട്. ലൈൻ നിർമ്മാണ പ്രവൃത്തിക്കായി ഇതുവരെ 5.12 കോടി രൂപ ചെലവഴിച്ചിട്ടുണ്ട്.

66 kV ഞാറയ്ക്കൽ സബ്സ്റ്റേഷന്റെ ശേഷി 66 kV യിൽ നിന്നും 110 kV നിലവാരത്തിലേക്ക് ഉയർത്തുന്നതിന്റെ ഭാഗമായി ആരംഭ പ്രവർത്തനങ്ങളായ 11 kV RMU, ഓക്സിലറി ട്രാൻസ്ഫോർമർ എന്നിവ മാറ്റി സ്ഥാപിക്കുന്ന പ്രവർത്തികൾ പൂർത്തീകരിച്ചു. നിലവിലെ ഉപഭോഗ വർദ്ധന പരിഗണിച്ച് ആദ്യ പ്രൊപ്പോസലിൽ ഉണ്ടായിരുന്ന 12.5 MVA 110/11 kV യുടെ രണ്ട് ട്രാൻസ്ഫോർമറുകൾക്ക് പകരം 20 MVA (110/11 kV) യുടെ രണ്ട് ട്രാൻസ്ഫോർമറുകൾ സ്ഥാപിക്കാനും കൂടാതെ 66 kV കളമശ്ശേരി - ഞാറയ്ക്കൽ ഫീഡർ 110 kV യായി ഉയർത്താനും പരിഗണനയിലുണ്ട്.

ലൈൻ നിർമ്മാണ പുരോഗതിക്കനുസരിച്ച്, 66 kV ഞാറയ്ക്കൽ സബ്സ്റ്റേഷന്റെ ശേഷി 66 kV യിൽ നിന്നും 110 kV നിലവാരത്തിലേക്ക് ഉയർത്തുന്ന പ്രവൃത്തി പൂർത്തീകരിക്കുന്നതാണ്.

**അനേർട്ട്**

സൗരോർജ്ജ ഉത്പാദനവുമായി ബന്ധപ്പെട്ട് കേരളത്തിലെ കർഷകർ കാര്യങ്ങൾ ആവശ്യത്തിന് ഉപയോഗിക്കുന്ന ജലപമ്പകൾ സൗരോർജ്ജ പാനലുകൾ ഉപയോഗിച്ച് വൈദ്യുതീകരിക്കുന്ന പദ്ധതിയാണ് പി.എം കസും കംപോണന്റ് സി പദ്ധതി. ഈ പദ്ധതിയിലൂടെ കർഷകർക്ക് സൗരോർജ്ജം ഉപയോഗിച്ച് വെള്ളം പമ്പ് ചെയ്യുന്നതിനും, ഉപയോഗശേഷം മിച്ചം വരുന്ന

ഊർജ്ജം KSEBL-ന് വിൽക്കുന്നതിലൂടെ ഒരു വരുമാനം നേടുവാനും കഴിയുന്നു. ഈ പദ്ധതി പ്രകാരം വേലായുധൻ ഐ.വി, ഇല്ലത്തുപറമ്പിൽവീട്, നെടുങ്ങാട്, നായരമ്പലം പി.ഒ എന്ന കർഷകന്റെ കൃഷിയിടത്തെ പമ്പ് സൗരോർജ്ജവൽക്കരിക്കുന്നതിനായി 3 kW ശേഷിയുള്ള സൗരോർജ്ജ നിലയം സ്ഥാപിച്ചു നൽകി.

ഈ സർക്കാർ അധികാരത്തിൽ വന്നശേഷം അനേകർട്ട് മുഖാന്തിരം വൈപ്പിൻ മണ്ഡലത്തിൽ ഡെപ്യൂസിറ്റ് പദ്ധതിയിൽ ഉൾപ്പെടുത്തി വിവിധ സ്ഥാപനങ്ങളിലായി ആകെ 12 കിലോ വാട്ട് ശേഷിയുള്ള സൗരോർജ്ജ നിലയങ്ങൾ സ്ഥാപിച്ചു. വിശദാംശങ്ങൾ ചുവടെ ചേർക്കുന്നു:

| ക്രമ നം. | സ്ഥാപനത്തിന്റെ പേര്       | പ്ലാന്റ് തരം | ശേഷി (കിലോവാട്ട്) |
|----------|---------------------------|--------------|-------------------|
| 1        | നായരമ്പലം ഗ്രാമപഞ്ചായത്ത് | ഹൈബ്രിഡ്     | 5 kW              |
| 2        | ജി.യു.പി.എസ് എടവനക്കാട്   | ഓൺ ഗ്രിഡ്    | 3 kW              |
| 3        | ഞാറക്കൽ പോലീസ് സ്റ്റേഷൻ   | ഓൺ ഗ്രിഡ്    | 2 kW              |
| 4        | മുളവുകാട് പോലീസ് സ്റ്റേഷൻ | ഓൺ ഗ്രിഡ്    | 2 kW              |

**പി എം കസും കംപോണന്റ് സി പദ്ധതി**

നിലവിലെ സ്ഥിതി: പദ്ധതി പൂർത്തീകരിച്ചു  
 വർക്ക് ഓർഡർ തുക: Rs.228188/-  
 സംസ്ഥാന വിഹിതം: Rs.87548/-  
 കേന്ദ്ര വിഹിതം: Rs.43470/-  
 കർഷക വിഹിതം: Rs.97170/-  
 വർക്ക് ഓർഡറിന്റെയും, സംസ്ഥാന വിഹിതം അനുവദിച്ചതിന്റെയും പകർപ്പുകൾ **അനുബന്ധം-3** ആയി ഉൾകൊള്ളിക്കുന്നു.  
 ഡെപ്യൂസിറ്റ് പദ്ധതി സംബന്ധിച്ച വിശദാംശങ്ങൾ **അനുബന്ധം-4** ആയി ചേർക്കുന്നു.

(ബി) ഓരോ പ്രവൃത്തിയുടെയും നിലവിലെ സ്ഥിതി, അനുവദിച്ച തുക എന്നിവ സംബന്ധിച്ച വിവരങ്ങളും ഉത്തരവുകളുടെ പകർപ്പും ലഭ്യമാക്കാമോ?

(ബി) **കെ.എസ്.ഇ.ബി.എൽ.**  
 ഈ സർക്കാർ അധികാരത്തിൽ വന്നതിനു ശേഷം വൈദ്യുതി വകുപ്പ് മുഖാന്തിരം വൈപ്പിൻ മണ്ഡലത്തിലെ മട്ടാഞ്ചേരി ഡിവിഷൻ കീഴിലെ വൈപ്പിൻ, ഞാറക്കൽ സെക്ഷനുകളിൽ 8,09,14,972/- രൂപയുടെ ദൃതി വർക്കുകൾ പൂർത്തീകരിച്ചു. 22,71,183/- രൂപയുടെ ദൃതി വർക്കുകൾ പുരോഗമിക്കുന്നു. 36,27,171/- രൂപയുടെ തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ നടപ്പിലാക്കുന്ന പദ്ധതികളിൽ ഉൾപ്പെടുത്തി പിപിഎസ്സ് വർക്കുകളും പൂർത്തീകരിച്ചു. വൈപ്പിൻ, ഞാറക്കൽ സെക്ഷനുകളിലെ RDSS

പദ്ധതിയിൽ ഉൾപ്പെടുത്തി 2,65,43,773/- രൂപയുടെ 20.55 കി.മീ. LT ലൈൻ സ്ഥാപിക്കുന്നതും, 9.01 കി.മീ 11കെ.വി. ലൈൻ ABC ആക്കുന്ന പ്രവൃത്തിയും പുരോഗമിച്ചുവരുന്നു.

വൈപ്പിൻ മണ്ഡലത്തിലെ മട്ടാഞ്ചേരി ഡിവിഷൻ കീഴിൽ വൈപ്പിൻ, ഞാറക്കൽ സെക്ഷനുകളിൽ ദൃതി വർക്കിൽ ഉൾപ്പെടുത്തി 3.55 കി.മീ പുതിയ HT ABC ലൈനുകൾ. വലിക്കുന്നതിന് 6,37,07,337/- രൂപയുടെ പ്രവർത്തിയും പഴയ UG കേബിൾ മാറ്റി പുതിയ കേബിൾ സ്ഥാപിച്ച വകയിൽ 33,60,739/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. LT ലൈൻ റിക്കണ്ടുകൂർ ചെങ്കുട്ടി വകയിൽ 92,44,922/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. ലൈൻ വലിച്ചു പുതിയ ട്രാൻസ്ഫോർമർ സ്ഥാപിച്ചതിന് 30,31,725/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. ട്രാൻസ്ഫോർമറിന്റെ ശേഷി വർദ്ധിപ്പിക്കുന്നതിനായി 15,70,249/- രൂപയുടെ വർക്ക് പൂർത്തീകരിച്ചു. 36,27,171/- രൂപയുടെ തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ നടപ്പിലാക്കുന്ന പദ്ധതികളിൽ ഉൾപ്പെടുത്തി പിപിഎസ്സ് വർക്കുകളിൽ 2.8 കി.മീ. LT ABC, 6 കി.മീ. 2 wire LT ലൈൻ, 8.1 കി.മീ. LT അഡീഷണൽ കണ്ടക്ടർ എന്നിവ വലിക്കുന്ന ജോലികളും പൂർത്തീകരിച്ചിട്ടുണ്ട്.

കൂടാതെ RDSS പദ്ധതിയിൽ ഉൾപ്പെടുത്തി 20.55 കി.മീ. LT ലൈൻ സ്ഥാപിക്കുന്നതും, 9.01 കി.മീ 11 കെ.വി. ലൈനും ABC ആക്കുന്ന 2,65,43,773/- രൂപയുടെ പ്രവൃത്തിയും പുരോഗമിക്കുന്നു. ദൃതി പദ്ധതിയിൽ 22,71,183/- രൂപയുടെ 4 ട്രാൻസ്ഫോർമറുകളുടെ ശേഷി ഉയർത്തുന്ന ജോലിയും പുരോഗമിക്കുന്നു.

വൈപ്പിൻ നിയോജക മണ്ഡലത്തിൽ, സൗര ഫേസ് 1 പദ്ധതിയിൽ ഉൾപ്പെടുത്തി 30 kW സ്ഥാപിതശേഷിയിൽ 5 പുരപ്പുറ സൗരോർജ്ജ നിലയങ്ങൾ സ്ഥാപിച്ചിട്ടുണ്ട്.

പദ്ധതിക്ക് വേണ്ടി ആകെ 13,50,000/- രൂപ ചെലവാക്കിയിട്ടുണ്ട്. എല്ലാ പദ്ധതികളും പൂർത്തീകരിച്ചിട്ടുണ്ട്.

വൈപ്പിൻ നിയോജക മണ്ഡലത്തിൽ വൈദ്യുതിവകുപ്പ് മുഖേന 6 പോൾ മൗണ്ടഡ് ചാർജിംഗ് സ്റ്റേഷനുകൾ സ്ഥാപിച്ചിട്ടുണ്ട്. പദ്ധതിയുടെ വിശദാംശങ്ങളും ചെലവഴിച്ച തുകയും **അനുബന്ധം-1** ആയി ചേർത്തിട്ടുണ്ട്. പ്രവൃത്തി പൂർത്തീകരിച്ചിട്ടുണ്ട്.

ഉത്തരവുകളുടെ പകർപ്പ് **അനുബന്ധം-2** ആയി ചേർത്തിട്ടുണ്ട്.

പ്രസരണ വിഭാഗത്തിനു കീഴിൽ വൈപ്പിൻ മണ്ഡലത്തിൽ 66 kV ഞാറയ്ക്കൽ സബ്സ്റ്റേഷന്റെ ശേഷി 110 kV നിലവാരത്തിലേക്ക് ഉയർത്തുന്ന പ്രവൃത്തിയും, ഇതുമായി ബന്ധപ്പെട്ട് ചെറായി - ഞാറയ്ക്കൽ 110 kV ലൈനിന്റെ നിർമ്മാണവും നടന്നു വരുന്നു.

ചെറായി - ഞാറയ്ക്കൽ 110 kV ലൈൻ നിർമ്മാണ പ്രവൃത്തിയുടെ ഭാഗമായി മൊത്തം 49 ട്രാൻസ്മിഷൻ ലൈൻ ടവറുകൾ നിർമ്മിക്കേണ്ടതിൽ ഇതുവരെ 28 ടവർ ഫൗണ്ടേഷനുകളുടെ നിർമ്മാണം പൂർത്തിയായി. 21 ടവറുകൾ സ്ഥാപിച്ചു. ലൈനിന്റെ 48 ടവർ ലോക്കേഷനുകളും ചെമ്മീൻ കെട്ടുകളിലൂടെയാണ് കടന്നുപോകുന്നത് എന്നതിനാൽ വർഷത്തിൽ 5 മാസം മാത്രമേ പ്രവൃത്തികൾ നടത്തുവാൻ സാധിക്കുകയുള്ളൂ. കൂടാതെ കടലിനോട് അടുത്തുള്ള സ്ഥലം ആയതിനാൽ വേലിയേറ്റം മൂലമുള്ള ബുദ്ധിമുട്ടുകളും ടവർ

ഘണ്ടേഷൻ നിർമ്മാണത്തിന് തടസ്സമായുണ്ട്. ഭൂവുടമകളിൽ നിന്നുള്ള എതിർപ്പുകളും പദ്ധതിയുടെ കാലതാമസത്തിന് കാരണമാണ്. മൂന്ന് ഹർജികൾ എറണാകുളം എ.ഡി.എമ്മിന് മുമ്പാകെ തീർപ്പാക്കലിനായി നിലവിലുണ്ട്. ലൈൻ നിർമ്മാണ പ്രവൃത്തിക്കായി ഇതുവരെ 5.12 കോടി രൂപ ചെലവഴിച്ചിട്ടുണ്ട്.

66 kV ഞാറയ്ക്കൽ സബ്സ്റ്റേഷന്റെ ശേഷി 66 kV യിൽ നിന്നും 110 kV നിലവാരത്തിലേക്ക് ഉയർത്തുന്നതിന്റെ ഭാഗമായി ആരംഭിച്ച പ്രവർത്തനങ്ങളായ 11 kV RMU, ഓക്സിലറി ട്രാൻസ്ഫോർമർ എന്നിവ മാറ്റി സ്ഥാപിക്കുന്ന പ്രവർത്തനങ്ങൾ പൂർത്തീകരിച്ചു. നിലവിലെ ഉപഭോഗ വർദ്ധന പരിഗണിച്ച് ആദ്യ പ്രൊപ്പോസലിൽ ഉണ്ടായിരുന്ന 12.5 MVA 110/11 kV യുടെ രണ്ട് ട്രാൻസ്ഫോർമറുകൾക്ക് പകരം 20 MVA (110/11 kV) യുടെ രണ്ട് ട്രാൻസ്ഫോർമറുകൾ സ്ഥാപിക്കാനും കൂടാതെ 66 kV കളമശ്ശേരി - ഞാറയ്ക്കൽ ഫീഡർ 110 kV യായി ഉയർത്താനും പരിഗണനയിലുണ്ട്.

ലൈൻ നിർമ്മാണ പുരോഗതിക്കനുസരിച്ച്, 66 kV ഞാറയ്ക്കൽ സബ്സ്റ്റേഷന്റെ ശേഷി 66 kV യിൽ നിന്നും 110 kV നിലവാരത്തിലേക്ക് ഉയർത്തുന്ന പ്രവൃത്തി പൂർത്തീകരിക്കുന്നതാണ്.

**അനേർട്ട്**

സൗരോർജ്ജ ഉൽപാദനവുമായി ബന്ധപ്പെട്ട് കേരളത്തിലെ കർഷകർ കാർഷിക ആവശ്യത്തിന് ഉപയോഗിക്കുന്ന ജലപമ്പകൾ സൗരോർജ്ജ പാനലുകൾ ഉപയോഗിച്ച് വൈദ്യുതീകരിക്കുന്ന പദ്ധതിയാണ് പി.എം കസും കംപോണന്റ് സി പദ്ധതി. ഈ പദ്ധതിയിലൂടെ കർഷകർക്ക് സൗരോർജ്ജം ഉപയോഗിച്ച് വെള്ളം പമ്പ് ചെയ്യുന്നതിനും, ഉപയോഗശേഷം മിച്ചം വരുന്ന ഊർജ്ജം KSEBL-ന് വിൽക്കുന്നതിലൂടെ ഒരു വരുമാനം നേടുവാനും കഴിയുന്നു. ഈ പദ്ധതി പ്രകാരം വേലായുധൻ ഐ.വി, ഇല്ലത്തുപറമ്പിൽവീട്, നെടുങ്ങാട്, നായരമ്പലം പി.ഒ എന്നീ കർഷകന്റെ കൃഷിയിടത്തെ പമ്പ് സൗരോർജ്ജവൽക്കരിക്കുന്നതിനായി 3 kW ശേഷിയുള്ള സൗരോർജ്ജ നിലയം സ്ഥാപിച്ചു നൽകി.

ഈ സർക്കാർ അധികാരത്തിൽ വന്നശേഷം അനേർട്ട് മുഖാന്തിരം വൈപ്പിൻ മണ്ഡലത്തിൽ ഡെപ്പോസിറ്റ് പദ്ധതിയിൽ ഉൾപ്പെടുത്തി വിവിധ സ്ഥാപനങ്ങളിലായി ആകെ 12 കിലോ വാട്ട് ശേഷിയുള്ള സൗരോർജ്ജ നിലയങ്ങൾ സ്ഥാപിച്ചു. വിശദാംശങ്ങൾ ചുവടെ ചേർക്കുന്നു:

| ക്രമ നം. | സ്ഥാപനത്തിന്റെ പേര്       | പ്ലാന്റ് തരം | ശേഷി (കിലോവാട്ട്) |
|----------|---------------------------|--------------|-------------------|
| 1        | നായരമ്പലം ഗ്രാമപഞ്ചായത്ത് | ഹൈബ്രിഡ്     | 5 kW              |
| 2        | ജി.യു.പി.എസ് എടവനക്കാട്   | ഓൺ ഗ്രിഡ്    | 3 kW              |
| 3        | ഞാറയ്ക്കൽ പോലീസ് സ്റ്റേഷൻ | ഓൺ ഗ്രിഡ്    | 2 kW              |
| 4        | മുളവുകാട് പോലീസ് സ്റ്റേഷൻ | ഓൺ ഗ്രിഡ്    | 2 kW              |

പി എം കസം കമ്പോണന്റ് സി പദ്ധതി

നിലവിലെ സ്ഥിതി: പദ്ധതി പൂർത്തീകരിച്ചു

വർക്ക് ഓർഡർ തുക: Rs.228188/-

സംസ്ഥാന വിഹിതം: Rs.87548/-

കേന്ദ്ര വിഹിതം: Rs.43470/-

കർഷക വിഹിതം: Rs.97170/-

വർക്ക് ഓർഡറിന്റെയും, സംസ്ഥാന വിഹിതം അനുവദിച്ചതിന്റെയും പകർപ്പുകൾ **അനുബന്ധം-3** ആയി ഉൾക്കൊള്ളിക്കുന്നു.

ഡെപ്യൂസിറ്റ് പദ്ധതി സംബന്ധിച്ച വിശദാംശങ്ങൾ **അനുബന്ധം-4** ആയി ചേർക്കുന്നു.

സെക്ഷൻ ഓഫീസർ

| <u>List of Pole mounted Charging Station in Vypeen Constituency</u> |                    |              |                   |
|---------------------------------------------------------------------|--------------------|--------------|-------------------|
| SL No.                                                              | Location Name      | Section      | Amount (in Lakhs) |
| 1                                                                   | Bolgatty JN        | Vypin        | 1.67              |
| 2                                                                   | Gothri Junction    | Vypin        |                   |
| 3                                                                   | Sahothara Nagar    | Njarakkal    |                   |
| 4                                                                   | Palli Stop         | Cherai       |                   |
| 5                                                                   | Pallathamkulangara | Cherai       |                   |
| 6                                                                   | Panamittam         | Cheranellore |                   |



## KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

CIN: U40100KL2011SGC027424, website: [www.kseb.in](http://www.kseb.in)

Reg. Office : Vidyuthi Bhavanam, Pattom, Thiruvananthapuram - 695 004.

Phone: 0471-2514725, 9446008398



### ABSTRACT

Sub: RDSS - Project implementation in KSEBL - methodology for carrying out System Infrastructure works and AS for the project - sanction accorded- orders issued

### Corporate Office ( SBU D)

B.O (FTD) No: 463/2022 (CAPs/P2/RDSS/2022-23 Thiruvananthapuram;

Dated 30.05.2022

- Read: 1. Letter No. CAPs/P2/RDSS-GI/2021-22/330/ dated 02.03.22 - DPRs under KSEBL - of CMD, KSEBL
2. Sanction letter No. 02:10:RDSS:2021:I: KSEBL/076120/ dated 24.03.2022 from PFC Limited, New Delhi for RDSS in KSEBL
3. Proceedings No. Annual Accounts/AA9/Account code-5/2021-22 dated 15.01.2022 of the Financial Adviser
4. B.O(FTD) No. 307/2022 (CAPs)/RDSS/AEE2/21-22/ dated 12.04.2022
5. Note No. CAPs/P2/RDSS/2022-23 dated 26.04.2022 of the Chief Engineer (IT, CR & CAPs) - Agenda item No. 29/5/2022

### ORDER

The 7<sup>th</sup> Monitoring Committee for RDSS held on 15.03.2022 approved the Action Plan & DPRs for Loss Reduction and Smart Metering works proposed by KSEBL. Sanction was accorded for the DPR proposals submitted as per letter read as 1<sup>st</sup> above, for a total amount of Rs. 10475.03 Cr. to achieve the Action Plan targets and the same was communicated as per letter read as 2<sup>nd</sup> above. The sanction communicated also includes the Smart System metering & Infrastructure work proposals from Cochin Port Trust (CPT) (later renamed as Cochin Port Authority, CoPA) amounting to Rs. 9.87Cr. The approved DPR cost and 60% GoI Grant for the Loss Reduction Infrastructure works (except Smart metering) under KSEBL is as follows:

| SI No. | Description                          | Amount (Rs.Cr.) | Remarks              |
|--------|--------------------------------------|-----------------|----------------------|
| 1      | Loss Reduction works                 | 2226.15         |                      |
| 2      | GoI Grant for Loss Reduction works   | 1341.47         |                      |
| 3      | PMA charges for Loss Reduction works | 33.39           | 1.5% of Project Cost |
| 4      | PMA Grant                            | 20.035          | (60% of PMA charges) |
| 5      | Total eligible GoI Grant             | <b>1361.59</b>  |                      |

**Terms and conditions** of the sanction are as given below:

- KSEBL to ensure implementation of the scheme in accordance with all the prescribed scheme guidelines including SBDs.
- KSEBL to appoint Project Management Agency/(ies) through Tendering based on SBD

- KSEBL to have an in-principal agreement w.r.t. works being sanctioned to CPT by Monitoring Committee

1. **Infrastructure works & PMA Charges:**

As per the detailed terms & conditions of sanction,

1. The projects shall be implemented as per the scheme Guidelines issued by MoP, Govt. of India and normally on Turnkey basis. However, certain works may be taken up on Partial Turnkey basis or Departmentally with the approval of DRC and consent of Nodal Agency, subject to, overall guidance of the Monitoring Committee.
2. Discom to follow Standard Bidding Document (**SBD**) as issued by Nodal Agencies for selection of AMI service provider, for Distribution infrastructure works, SCADA and PMA.
3. The DISCOMs may make minor changes in the SBD, while retaining its basic structure and essence, provided that the approval of the Nodal Agency is taken for the changes, subject to, overall guidance of the Monitoring Committee. Approval for the decision on the mode of execution other than Turnkey contracts will have to be obtained from DRC and consent of Nodal Agency with the overall guidance of Monitoring Committee
4. The sunset date for the scheme will be 31.03.2026, the works executed beyond which will not be eligible for release of Central Government grant.
5. Discom to ensure updation of MIS web portal to be developed by the Nodal Agencies for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, Quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, Closure, etc.
6. KSEBL to meet the pre-qualifying criteria and achieve the specified marks in the Evaluation Matrix based on which DPR for Modernisation & System Augmentation shall be sanctioned
7. For qualifying in **the Result Evaluation Matrix**, KSEBL needs to score a minimum of 60 marks, based on the evaluations by appropriate third party/parties appointed by MOP / Nodal Agencies to assess / verify the achievements of DISCOMs with respect to the action plan finalized on periodical basis
8. Again, **Performance Evaluation of the scheme** will be carried out by a separate Third-party Agency/(ies) by the Nodal Agencies.
9. If by the end of financial year 2025-26, if KSEBL is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the KSEBL.

The Scheme Implementation Tripartite Agreement amongst KSEBL, Govt. of Kerala and Ministry of Power, Govt. of India has been executed on 29.03.2022 and the Dedicated Savings Bank Account for RDSS without CLTD facility was opened on 30.03.2022.

2. **Project Implementation Proposals under KSEBL**

The Loss Reduction DPR proposals along with SCADA-DMS for 3 towns - Thrissur, Kannur & Kollam were approved by MoP as phase I - for FY 2022-23. Of these, SCADA DMS works will be implemented on Turnkey basis.

**Works Proposed:-** The quantum of works proposed and sanctioned under RDSS - DPR for Loss Reduction including infrastructure works for the SCADA DMS proposals approved along with is attached as Table - 1

The abstract of major materials approximately required for Distribution works -Region wise & State total (calculated from Cost Data, in anticipation of requirement proposals from field) is attached as Table - 2.

33 kV sub transmission works will be executed by the Transmission wing.

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### 3. Monitoring of award of Work & Progress of works for uploading data in web portal for RDSS

As per the Guidelines and the Sanction letter,

- a. Discom has to ensure updation of MIS web portal (to be developed by the Nodal Agencies) for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, Quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc.
- b. The DISCOM shall be responsible & accountable for assuring Quality in the scheme works. Accordingly, DISCOM shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build quality infrastructure under the project. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works. Documentation with regard to **Quality Assurance & Inspection Plan** shall be maintained by DISCOM and kept in proper order for scrutiny during the course of project execution and for future reference. The DISCOM has to ensure that the quality of material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan. DISCOM may use the MQP (Manufacturing Quality Plan) and FQP (Field Quality Plan) used in DDUGJY and IPDS schemes by suitably modifying as per requirement of this scheme.
- c. In addition to the in-house quality checks and processes followed by the DISCOM, the nodal agency shall carry out concurrent inspection of works through Third Party Quality Monitoring Agency (**TPQMA**).
- d. For release of funds under the Scheme, KSEBL has to ensure updation of baseline data, physical & financial progress, Quality Monitoring, Fund Management, Asset identification through Geo-tagging, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc. on the digital platform to be developed by the Nodal Agencies
- e. Hence in order to comply with the conditionalities as above from MoP, right from the initial stages of implementation, provision of the following data has to be incorporated in SAMAGRA portal
  - For capturing details of works awarded / completed against each work as per sanctioned DPR, mapped in the portal
  - To obtain **Geo tagged data** including photographs of the Asset created, (from the Contractor itself) while submitting claims for payment and the entry field to be made **mandatory**

- Provision for entering Separate Tax details including the Central & State share of the Tax against each payment. (Reimbursement of expenditure on Central Tax only will be eligible).
- To capture – "Sanctioned Quantity & Sanctioned Project Cost " and "Actual Quantity executed" & "Actual Expenditure – Material Cost (MCS) + Labour Cost" against the specified work, as Guidelines clearly specifies reimbursement of actual **Material + Labour** cost only
- Each completed work shall be measured and payment to be effected within 21 days from the date of completion in all respects and progress of works to be registered only after the same is accounted in separate Registers (BPRs) and passed for payment from the Electrical Circle and forwarded to CE(IT, CR & CAPs)
- Updation of the above in SAMAGRA" is to be "mandatory" as RDSS is strictly a Result linked project, for uploading relevant data as is required in MoP's web portal as well as for relevant verifications / inspections from TPQMA.

**4. Work implementation – Organizational structure**

Administrative Sanction for Phase -1 the scheme (RDSS – Loss reduction works including implementation of SCADA DMS) has to be issued based on the Sanction letter and methodology for implementation. The Organizational set up for implementation also has to be finalized.

As per RDSS Guidelines, "establishment of a dedicated project implementation cell at District level and a centralized cell at Head office level" has been insisted.

The matter was placed before the Full Time Directors as per note read as 5<sup>th</sup> above. Having considered the matter in detail, the Full Time Directors in its meeting held on 12.05.2022

**A.** Resolved to accord sanction to execute the Loss Reduction works (Phase 1) with the mode of execution –

i. a. For the Distribution Infrastructure works as follows:

| <b>Distribution Region</b>    | <b>Partial Turnkey mode</b>                                                              | <b>Departmental mode utilising normal Petty Contractors/ Departmental staff</b>                                 |
|-------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>North Malabar (Kannur)</b> | HT & LT Reconductoring, Conversion, HT & LT new bare OH lines, ABC/ Covered Conductor/UG | Enhancement of DTRs / Aged Transformer replacement, Transformer insertion in existing lines, HVDS, uplifting of |
| <b>North</b>                  | Cables & RMUs etc. including supply of Transformers & Poles                              | Transformer / RMU foundations, Relocating transformers etc.                                                     |

|                |                                                                                            |                                                                                                                                                                                 |
|----------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | (PSC Poles & A- type Poles)                                                                |                                                                                                                                                                                 |
| <b>Central</b> | ABC & Covered conductor including                                                          | Reconductoring, Conversion, new 11kV & LT bare OH lines, Enhancement of DTRs / Aged Transformer replacement,                                                                    |
| <b>South</b>   | Transformers & supply of Poles (PSC & A-type Poles), Laying of UG cables, RMU installation | Transformer insertion in existing lines, HVDS, Disaster resilient works - uplifting of Transformer / RMU foundations, Relocating transformers, 9kVAR Capacitor installation etc |

- b. For the **Sub-transmission works** - 33 kV Line Re-conductoring works & 11 kV feeder outlets at Substations (under Kannur & Thrissur Circles sanctioned as part of SCADA-DMS implementation in 3 Towns) executed from Transmission wing,
  - c. **Departmental execution** for Re-conductoring works with Bare ACSR conductor
  - d. **Turnkey execution** of 33 kV Re-conductoring works using 33 kV Covered Conductor & 33 kV UG Cables
  - e. Departmental execution using available Petty Contractors of 11 kV Feeder outlets proposed from the Substations in Kannur & Thrissur Towns
  - ii. Approval for the decision on the mode of execution other than Turnkey contracts be obtained from DRC and consent of Nodal Agency be obtained with the overall guidance of Monitoring Committee
  - iii. Procurement process for materials required for the Partial turnkey /Departmentally proposed works - under Distribution & Transmission wings - to be started from the Office of CE(SCM) after ascertaining exact requirement of such materials from field (procurement - either from SCM only or a particular material from a particular Circle only, instead of local purchase of same material from various levels leading to considerable variation in Per unit Rate & Quality).
- B.** The monitoring of Award of Work and Progress of works be done the updating of **SAMAGRA** portal as below -
- a. To capture details of works awarded / completed against each work as per sanctioned DPR, mapped in the portal
  - b. To obtain Geo tagged data including photographs of the Asset created, (from the Contractor itself) while submitting claims for payment and the entry field to be made mandatory
  - c. Provision for entering Separate Tax details including the Central & State share of the Tax against each payment. (Reimbursement of expenditure on Central Tax only will be eligible).

- d. To capture - "Sanctioned Quantity & Sanctioned Project Cost " and "Actual Quantity executed" & "Actual Expenditure - Material Cost (MCS) + Labour Cost" against the specified work, as Guidelines clearly specifies reimbursement of actual Material + Labour cost only
- e. Each completed work shall be measured and payment preferred within 21 days from the date of completion in all respects and progress of works to be registered only after the same is accounted in separate Registers (BPRs) -provision of which will be provided through SAMAGRA - and accounted and passed for payment from the Electrical Circle and forwarded to CE(IT, CR & CAPs)

**C. Organizational Structure for RDSS** be fixed as mentioned as below:

|     | Description                                                           | Officer nominated              |
|-----|-----------------------------------------------------------------------|--------------------------------|
| 1   | Nodal Officer for RDSS at Corporate level                             | Chief Engineer (IT, CR & CAPs) |
| 2   | Corporate office-Single Point of Contact                              |                                |
| i   | System Infrastructure works                                           | Deputy Chief Engineer (CAPs)   |
| ii  | System Infrastructure works- Quality Assurance / Material inspections | Executive Engineer (CAPs)      |
| iii | Smart Metering, SCADA implementation & IT/OT works                    | Deputy Chief Engineer (IT&CR)  |

**Field Level Implementation Committee** - for monitoring the progress of works:

| Sl.No. | Description                           | Officer nominated                                                           |
|--------|---------------------------------------|-----------------------------------------------------------------------------|
| 1      | Nodal Officer for RDSS at Field level | Deputy Chief Engineer (Ele. Circle)                                         |
| 2      | Member                                | Deputy Chief Engineer/(s) (Transmission)                                    |
| i      | Member                                | Exe. Engineers, Ele. Divisions & Exe. Engineers-(PMU) & Transmission Circle |
| ii     | Circle level single point of Contact  | Executive Engineer (PMU)                                                    |

- D.** Resolved to address the State Government to provide 40% Counter Part Funding towards the project, as an aid to the Utility by including suitable budget provisions towards the same. **Director (Finance)** be entrusted to take up with the State Government through CMD, KSEBL

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- E. Further resolved to issue Administrative Sanction for the Loss Reduction DPR for RDSS as sanctioned by the Ministry of Power, for an amount of Rs.2226.16Cr including the SCADA – DMS works for 3 Towns amounting to Rs.252.9Cr which were originally included in the DPR as Phase – I DPR for Loss Reduction works under KSEBL. The Account codes for booking expenditure under RDSS Infrastructure works can be, as specified in the Proceedings dated 15.1.22 of the Financial Adviser read as 3<sup>rd</sup> above
- F. Further resolved to accord sanction to execute the works included in the sanctioned DPR w.e.f the date of communicating the Sanction for RDSS in KSEBL by the Nodal Agency, M/s PFC Ltd. – ie; 24.03.2022, strictly in accordance with the scheme guidelines and the SBD issued by the Ministry of Power, Government of India.

Orders are issued accordingly.

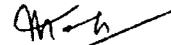
By Order of the Full Time Directors.  
Sd/-  
Lekha.G  
**Company Secretary-in-Charge.**

To  
The Chief Engineer (IT, CR & CAPS)

Copy to:

1. All Chief Engineers (Distribution / Transmission)
2. All Deputy Chief Engineers (Distribution / Transmission)
3. The Financial Advisor / CIA/LA & DEO/CVO/CPRO.
4. The TA to CMD / Director (D & IT) / GC / T & SO / GE / REES including SOURA, Sports and Welfare / Planning, Safety & SCM)
5. RCAO/RAO/Company Secretary.
6. The PA to the Director (Finance)/CA to Secretary (Administration)
7. Records/Stock file and Library.

Forwarded / By Order

  
**Assistant Exe. Engineer.**

**Table -1 Works proposed under RDSS (Phase 1)- Loss Reduction**

| Sl.No. | Particulars                           | Total Quantity as per proposal |
|--------|---------------------------------------|--------------------------------|
| 1.     | 33 kV Re-conductoring                 | <b>499.81 ckt km</b>           |
|        | 33 kV ACSR Bare OH - Dog conductor    | 70.6 ckt.km                    |
|        | 33kV UG Cable                         | 29 ckt.km                      |
|        | 33 kV Covered Conductor - Dog         | 400.21 ckt.km                  |
| •      | 11 kV Re-conductoring                 |                                |
|        | ACSR Bare Raccoon OH                  | 295.68 ckt.km                  |
|        | Covered Conductor                     | 1025.40 ckt.km                 |
|        | ABC 120 sq.mm                         | 966.16 ckt.km                  |
|        | ABC 150 sq.mm                         | 797.5 ckt.km                   |
| •      | LT line Re-conductoring               |                                |
|        | ACSR Bare OH - Rabbit                 | 1373.31 ckt.km                 |
|        | Covered Conductor                     | 501.64 ckt.km                  |
|        | 3 ph. ABC 3*(95/70/50) sq.mm          | 8006.44 ckt.km                 |
|        | 1 ph. ABC 50 sq.mm                    | 51.09 ckt.km                   |
| •      | Conversion of 1 ph to 3 ph.           |                                |
|        | using ABC 95 sq.mm                    | 327.935 ckt.km                 |
|        | ABC 70 sq.mm                          | 141.83 ckt.km                  |
|        | ABC 50 sq.mm                          | 17 ckt.km                      |
|        | With Bare ACSR OH                     | 295.82 ckt.km                  |
| •      | 11 kV new ABC                         |                                |
|        | 3 *120 sq.mm                          | 609.265 ckt.km                 |
|        | 3 *150 sq.mm                          | 456.645 ckt.km                 |
| •      | LT new ABC                            |                                |
|        | 95 sq.mm                              | 134.35 ckt.km                  |
|        | 70 sq.mm                              | 151.39 ckt.km                  |
| •      | 3* 300 sq.mm XLPE UG Cable            | 553.81 ckt.km                  |
| •      | HVDS Transformer                      |                                |
|        | 16 kVA                                | 17 nos.                        |
|        | 25 kVA                                | 77 nos.                        |
|        | 63 kVA                                | 1 no.                          |
| •      | Capacitor Bank, 9 kVAR                | 22 nos.                        |
| •      | 11/ 0.415 kV Distribution Transformer |                                |
|        | New installation - 100 kVA            | 858 nos.                       |
|        | 160 kVA                               | 20 nos.                        |
|        | 250 kVA                               | 3 nos.                         |
|        | Enhancement - to 100 kVA              | 82 nos.                        |
|        | to 160 kVA                            | 362 nos.                       |
|        | to 250 kVA                            | 58 nos.                        |
|        | to 315 kVA                            | 2 nos.                         |
|        | Aged replacement - 100 kVA            | 225 nos.                       |
|        | 160 kVA                               | 150 nos.                       |
|        | 250 kVA                               | 33 nos.                        |
|        | 315 kVA                               | 4 nos.                         |
|        | 500 kVA                               | 6 nos.                         |

|   |                                     |           |
|---|-------------------------------------|-----------|
| • | RMU                                 |           |
|   | CC                                  | 4 nos.    |
|   | CTC                                 | 291 nos.  |
|   | CCC                                 | 6 nos.    |
|   | Add on C                            | 37 nos.   |
|   | Add on T                            | 18 nos.   |
|   | Bus Couplers/ CCCTT                 | 9 nos.    |
| • | Load Break Switch                   | 22 Nos.   |
| • | AB switch                           | 13 Nos.   |
| • | Rust Free Transformers              | 29 Nos.   |
| • | Pole Insertion for ABC (additional) |           |
|   | HT 9m                               | 2248 Nos. |
|   | LT 8m                               | 4929 Nos. |
| • | 11kV feeder outlet                  | 13 Nos.   |

**Table - 2 Materials required (approximate) for the works proposed under RDSS (Phase 1)- Loss Reduction**

| RDSS - Major Materials - approximate requirement for FY 2022-23 |      |            |                                       |
|-----------------------------------------------------------------|------|------------|---------------------------------------|
| Item                                                            | Unit | F 2022-23  | Total (for the entire project period) |
| PSC pole 9m                                                     | No.  | 35776      | 84806                                 |
| PSC pole 8 m                                                    | No.  | 55117      | 143782                                |
| <b>33 kV line Re-conductoring</b>                               |      |            |                                       |
| 33 kV Covered Conductor                                         | km   | 494.71     | 1260.65                               |
| 33 kV UG Cable                                                  | km   |            | 30.45                                 |
| 33 kV ACSR Conductor                                            | km   |            | 218.2                                 |
| 33 kV Tower materials                                           |      |            |                                       |
| <b>ACSR</b>                                                     |      |            |                                       |
| ACSR Raccoon Conductor                                          | km   | 434.454    | 913.6512                              |
| ACSR Rabbit                                                     | km   | 2787.73    | 7984.48                               |
| <b>ABC conductor</b>                                            |      |            |                                       |
| 3ph (3X120 sq.mm)                                               | km   | 718.6817   | 1732.929                              |
| 3ph (3X150 sq.mm)                                               | km   | 723.30555  | 1379.511                              |
| <b>11 kV ABC (HT)</b>                                           |      | 1441.98725 | 3100.5601                             |
| ABC 3 x 95 sq.mm                                                | km   | 2384.28575 | 5332.5173                             |
| ABC 3 x70 sq.mm                                                 | km   | 1650.0594  | 4305.6167                             |
| ABC 3 x 50 sq.mm                                                | km   | 7.48       | 18.7                                  |
| <b>1.1 kV ABC (LT)</b>                                          |      | 4041.82515 | 9656.834                              |
| <b>1 Ph ABC</b>                                                 | km   | 11.56      | 51.09                                 |
| <b>Covered Conductor</b>                                        |      |            |                                       |
| <b>Covered conductor (11kV)</b>                                 | km   | 1159.011   | 3230.00055                            |
| Covered conductor(LT)                                           | km   | 560.83545  | 1598.51475                            |
| <b>UG cable</b>                                                 | km   | 247.653    | 581.5005                              |
| <b>Distribution Transformer</b>                                 |      |            |                                       |
| 100kVA                                                          | No.  | 556        | 1165                                  |
| 160 kVA                                                         | No.  | 256        | 532                                   |
| 250kVA                                                          | No.  | 49         | 94                                    |
| 315 kVA                                                         | No.  | 1          | 6                                     |
| 500 kVA                                                         | No.  | 2          | 6                                     |
| <b>Transformers Total</b>                                       |      | <b>864</b> | <b>1803</b>                           |
| CC RMU module                                                   | No.  | 3          | 4                                     |
| CTC                                                             | No.  | 157        | 291                                   |
| CCC                                                             | No.  | 1          | 6                                     |
| Add on C                                                        | No.  | 22         | 37                                    |
| Add on T                                                        | No.  | 9          | 18                                    |
| Others : CCCTT                                                  | No.  | 1          | 1                                     |
| Others / Bus couplers                                           | No.  | 2          | 8                                     |
| <b>RMU Total</b>                                                |      | <b>195</b> | <b>365</b>                            |
| AB Switch                                                       | No.  | 8          | 13                                    |
| Load Break Switch                                               | No.  | 16         | 22                                    |

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|                          |     |    |    |
|--------------------------|-----|----|----|
| Rust free transformer    | No. | 14 | 29 |
| Capacitor Bank, 9kVAR    | No. | 21 | 22 |
| <b>HVDS Transformer</b>  |     |    |    |
| HVDS Transformer, 16kVA  | No. | 5  | 17 |
| HVDS Transformer, 25kVA  | No. | 37 | 77 |
| HVDS Transformer, 63 kVA | No. | 1  | 1  |



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**KERALA STATE ELECTRICITY BOARD Ltd**

(Incorporated under the Companies Act, 1956)

Registered Office: Vidyuthi Bhavanam, Pattom, Thiruvananthapuram – 695 004

CIN: U40100KL2011SGC027424 Web: www.kseb.in

Phone : +91 471 – 2514685, 2514331

Email : ddkseb@kseb.in

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**ABSTRACT**

Revised Dyuthi 2.0 and Special Packages for Malappuram, Idukki, and Kasargod Districts - Capital Investment Plan - Sanctioned - Orders issued.

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**CORPORATE OFFICE (SBU-D)**

B.O. (DB) No.543/2024 (DIR(DIST)/DPMD/  
22031/Dyuthi 2.0 Revision) Thiruvananthapuram.

Dated:17-12-2024

- 
- Read :
1. B.O. (FTD) No.217/2024 (KSEBL/DIR/DIST/469/2024/AE9) dated 10.05.2024.
  2. B.O. FTD No.355/2024 (KSEBL/DIR/E31670/Dyuthi Mission Summer 2025-DPMD) dated 08.08.2024.
  3. Note No.DIR(DIST)/DPMD/22031/Dyuthi 2.0 Revision dated 02.11.2024 (Agenda No.16-11/2024).
  4. Proceedings of the 80<sup>th</sup> Meeting of the Board of Directors dated 07.11.2024 as per Resolution No.80/15.

**ORDER**

KSEBL submitted the Capital Investment Plan (CIP) for Distribution SBU for the period from 2022-23 to 2026-27 to the Honourable Kerala State Electricity Regulatory Commission (KSERC) on 31.01.2022, with an original total project cost of ₹4016.1 Crore. This CIP, named Dyuthi 2.0, was developed in 2021. However, in the time since its submission, several factors, including changing grid requirements, increased electricity demand projections, the national push for e-mobility, and the large-scale addition of distributed renewable energy, have necessitated a revision of the plan.

In response to these changes, a series of workshops and stakeholder consultations were conducted from January 2024 onwards. These consultations highlighted the following factors that necessitate a revision of the Capital Investment Plan:

- Accommodating higher growth in power demand.
- Implementing a phased conversion to insulated conductors.
- Incorporating Cost data Revision
- Addressing endemic loading issues in certain areas
- Modifying project elements to align with the RDSS (Reforms-Linked Distribution Sector Scheme) project requirements.

Based on the findings from the consultations, the revised total amount for the CIP is ₹4716.68 Crore, along with a special package of ₹1023.04 Crore for Malappuram, Idukki, and Kasargod districts. This package was developed to address the unique challenges faced in these regions.

The Chairman and Managing Director, as per note read as 3<sup>rd</sup> above placed the revised CIP of Dyuthi 2.0 and the special package for Malappuram, Idukki, and Kasargod districts before the Board of Directors for decision.

Having examined the matter in detail, the Board of Directors in its meeting held on 07.11.2024.

Resolved to accord sanction for the revised Capital Investment Plan (CIP) of ₹4716.68 Crore, abstract of which is provided below.

| Year    | DPR Amount Rs Cr. | Revised DPR Amount Rs Cr. |
|---------|-------------------|---------------------------|
| 2022-23 | 574.2             | 568.88                    |
| 2023-24 | 527.1             | 584.21                    |
| 2024-25 | 599               | 803.47                    |
| 2025-26 | 1191.5            | 1431.93                   |
| 2026-27 | 1124.2            | 1328.2                    |
| Total   | 4016.1            | 4716.68                   |

Resolved also to accord sanction for the special package for the districts of Malappuram, Idukki and Kasargod districts with a total project cost of ₹1023.04 Crore, abstract of which is provided below.

| Electrical Circle     | 24-25<br>(Amount in Crores) | 25-26<br>(Amount in Crores) | 26-27<br>(Amount in Crores) | Total<br>(Amount in Crores) |
|-----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Tirur                 | 103.42                      | 88.97                       | 65.13                       | 257.52                      |
| Manjeri               | 76.52                       | 36.71                       |                             | 113.23                      |
| Nilambur              | 23.74                       | 16.44                       |                             | 40.18                       |
| Malappuram Package    |                             |                             |                             | 410.93                      |
| Kasargod              | 144.65                      | 147.76                      | 101.74                      | 394.15                      |
| Idukki                | 133.99                      | 51.4                        | 32.57                       | 217.96                      |
| Total Special Package |                             |                             |                             | 1023.04                     |

Resolved further to allow execution of special packages on turn key basis.  
Orders are issued accordingly.

By Order of the Director Board

COMPANY SECRETARY

To: The Chief Engineers (Distribution South/ Central. North/ North Malabar)

The Deputy Chief Engineers of all Electrical Circles

Copy to:

The Company Secretary / Chief Engineer(IT,CR&CAPS) for publishing in the website/  
Financial Advisor / Chief Engineer (Commercial & Tariff) / LA&DEO /

Chief Internal Auditor / Chief Vigilance Officer

The Chief Personnel Officer / Public Relations Officer

The TA to the Chairman & Managing Director

The TA to the Director (HRM, Sports, Welfare, Safety & Quality Assurance)

The TA to the Director (Generation-Electrical, REES & SOURA)

The TA to the Director (Transmission & System Operation)

The TA to the Director (Distribution & SCM)

The TA to the Director (Generation-Civil)

The PA to the Director (Finance)

The Sr.CA to the Secretary (Administration)

The RCAO/ RAO

Stock File.

Forwarded By Order

Assistant Executive Engineer

**KSEB**  
കേരളാ വൈദ്യുത ബോർഡ്



ഉത്തമം കേരള മിഷൻ

**KERALA STATE ELECTRICITY BOARD LIMITED**

(incorporated under the Companies Act, 1956)

Reg. Office: Vydyuthi Bhavanam, Pattom, Thiruvananthapuram- 695004, Kerala

Phone: +91 471 2447404, Fax: 0471 2558340, E-mail: [cerees@kseb.in](mailto:cerees@kseb.in)

website : [www.kseb.in](http://www.kseb.in). CIN : U40100KL2011SGC027424

**ABSTRACT**

Setting up of 1000 Pole Mounted E V Charging Stations in all corporations and municipalities across the State – Administrative Sanction accorded - Orders issued

**Corporate Office (Renewable Energy and Energy Savings)**

B.O (FTD) No. 805 /2021 [CE(REES)/PM EVCS/2021-22], Thiruvananthapuram,

dated, 30.10.2021

Read:- 1. BO(FTD) No 694/2021/[CE(REES)/Emobility General/2020-21], Tvm, dated 23.09.2021

2. LoA no6/2021-22 dated 29.9.2021 to M/s chargeMOD, BPM Power Pvt Limited

3. Note No. CE(REES)/PM EVCS/2021-22/1191 dated 8.10.2021 of the Chief

Engineer(REES) & Chief Safety Commissioner submitted to the Full Time

Directors, KSEBL (Agenda 82/10/21)

**ORDER**

KSEBL AS per BO read as 1<sup>st</sup> above has accorded sanction to consider 10 locations for setting up of pole mounted EV Charging Stations as pilot project in Kozhikode city and the LoA read as 2<sup>nd</sup> above was also issued. It was also sanctioned to float tender for the setting up of 1000 pole mounted EV Charging Stations in all corporations and municipalities across the state subsequent to the implementation of the pilot project and to meet the expenditure required for this project from the E-Mobility promotion fund.

As per the Government of Kerala (GoK) EV policy, KSEBL has been designated as the nodal agency for establishing the EV charging infrastructure in the State. Accordingly, GoK has sanctioned Rs. 8.2 Crore vide Go (Rt) No.473/2019/TRANS dated 15.10.2019 through E-mobility Promotion fund, for the establishment of 32

EV charging stations. Rs. 5 Crore was received on 08.06.2020. For the setting up of 32 EV Charging Stations across Kerala Rs.6.42 Crores will be required. Six EVCS are commissioned and the work of the balance 26 locations is expected to be completed in two months time. Hence it was requested to release the balance amount of Rs 3.2 crore from the Transport Department, Government of Kerala. The expenditure towards the setting up of 10 pilot EV charging points amount to Rupees 2.52 Lakhs.

The proposal for establishing a statewide network of 1000 pole mounted charging points for 2 wheelers and 3 wheelers will have an estimated cost of Rs.3.5 Crores as detailed below.

| Sl. No. | Particulars                                                                                                                                                                                                                                                  | Unit Price (Rs.) | No of units | Total (Rs)                                           |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|------------------------------------------------------|
| 1       | Level 1 AC EV Charger (3.3kWx1 Gun) with a warranty of 5 years from the date of commissioning in KSEBL's Distribution Poles+ Software+CMS+Front end Mobile Application,Internet charges,installation and commissioning charges and other unforeseen expenses | 35000.00         | 1000        | 3,50,00,000.00 (Rupees Three Crores Fifty Lakh only) |

The balance amount available from the sanctioned amount of E-Mobility promotion fund is Rs.1.52 Crores and an additional amount of Rs.1.98 Crores would be required for the execution of the project.

The matter was placed before the Full Time Directors, KSEBL as per note read as 3rd above

Having considered the matter in detail, the Full Time Directors in its meeting held on 20.10.2021

1. Resolved to accord Administrative Sanction for the installation of 1000 Pole mounted Electric Vehicle charging stations across the state at an estimated cost of Rs. 3.5 Cr.
2. Further resolved to request for balance requirement of Rs.1.98 Cr to the E-mobility promotion fund of Transport commissioner, Government of Kerala.

3.Competitive vendor selection process will be followed.

Orders are issued accordingly.

By Order of the Full Time Directors

Sd/-  
**LEKHA G**  
COMPANY SECRETARY (I/C)

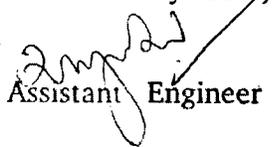
To

The Chief Engineer (REES) and Chief Safety Commissioner

Copy to:-

TA to Chairman & Managing Director/TA to Director(Gen (Ele) /TA to Director(Dist & IT )/TA to Director (Trans&SO)/TA to Director (Gen-Civil)/TA to Director(Planning,Safety&SCM)/TA to Director(REES,Soura,Sports&Welfare) /PA to Director(Finance)/Sr.CA to (Secretary(Admn))/Company Secretary/Fair Copy Superintendent/ Library/ Stock file.

Forwarded by order,

  
Assistant Engineer



കേരളം കേരളം കേരളം

**KERALA STATE ELECTRICITY BOARD LIMITED**

(incorporated under the Companies Act, 1956)

Reg. Office: Vidyuthi Bhavanam, Pattom, Thiruvananthapuram- 695004, Kerala

Phone: +91 471 2447404, Fax: 0471 2558340, E-mail: [cerees@kseb.in](mailto:cerees@kseb.in)

website : [www.kseb.in](http://www.kseb.in). CIN :U40100KL2011SGC027424

**ABSTRACT**

Setting up of 140 Pole Mounted E V Charging Stations in all LA  
constituencies in Kerala – Sanctioned - Orders issued

Corporate Office (Renewable Energy and Energy Savings)

B.O (FTD) No. 813 /2021 [CE(REES)/PM EVCS/2021-22], Thiruvananthapuram,  
dated, 01.11.2021

Read:- 1. BO(FTD) No 694/2021/[CE(REES)/Emobility General/2020-21], Tvm,  
dated 23.09.2021

2. LoA No.6/2021-22 dated 29.9.2021 to M/s chargeMOD,BPM Power Pvt Limited

3.BO(FTD) No 735/2021/[CE(REES)/PM-EVCS Pilot/2020-21], Tvm,  
dated 06.09.2021

4. Meeting held by the Hon'ble Minister for Electricity on 12.10.2021

5. E-mail dated 17.10.2021 from M/s chargeMOD, BPM Power Pvt Limited

6. E-mail dated 17.10.2021 from M/s chargeMOD, BPM Power Pvt Limited

7. Note No CE(REES)/PM EVCS/2021-22/1230 dated 13.10.2021 of the Chief  
Engineer(REES) & Chief Safety Commissioner submitted to the Full Time  
Directors,KSEBL

8.Note No CE(REES)/PM EVCS/2021-22/1257 dated 18.10.2021 of the Chief  
Engineer(REES) & Chief Safety Commissioner submitted to the Full Time  
Directors,KSEBL(Agenda No 70/10/21)

**ORDER**

KSEBL, as per the BO read as 1<sup>st</sup> above has accorded sanction to consider 10  
locations for setting up of pole mounted EV Charging Stations as pilot project in

Kozhikode city and the LoA read as 2<sup>nd</sup> above was issued for Rs. 2.52 Lakh for the 10 units to M/s chargeMOD, BPM Power Pvt Limited. The work was completed on 9.10.2021 and inaugurated by the Hon'ble Minister for Electricity. The installation is found successful.

In the meeting read as 4<sup>th</sup> convened by the the Hon'ble Minister for Electricity, it was directed to set up 140 Pole mounted Electric Vehicle Charging points for 2 and 3 wheelers one each in the LA constituency, in order to scale up the successful pilot project.

The estimate cost for establishing a statewide network of 140 Nos of pole mounted charging points for 2 wheelers and 3 wheelers will be Rs. 49 Lakh (Rs. 35,000 per unit) without taxes and duties.

While the matter was placed before the Full Time Directors, KSEBL as per note read as 7<sup>th</sup> above, the Chairman and Managing Director, KSEBL has directed to incorporate the cost benefit to KSEBL with projected lay off period.

Again the matter was placed as per note read as 8<sup>th</sup> above incorporating the details directed, that the number of years for achieving the return of investment is 12.54 years and considering the standard life expectancy of the charging equipment of 8 years, break even may not be achieved. In this scenario it was also recommended to implement the project availing any grant like e-mobility promotion fund as the project can be implemented without any financial burden on KSEBL's part.

Having considered the matter in detail, the Full Time Directors in its meeting held on 20.10.2021

1. Resolved to accord sanction to proceed with the implementation of the project as the return of investment for the project may be attained over a period of 12 years or more considering the present tariff structure and charging fee envisaged for the EVCS.
2. Further resolved to float tender for the setting up of 140 pole mounted EV Charging Stations for 2 and 3 wheelers one each in all LA constituencies of Kerala at an estimated amount of Rs.49,00,000/- (Rupees Forty Nine Lakh Only)

Orders are issued accordingly.

By Order of the Full Time Directors

sd/-

**LEKHA G**  
COMPANY SECRETARY (I/C)

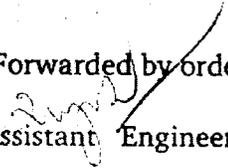
To

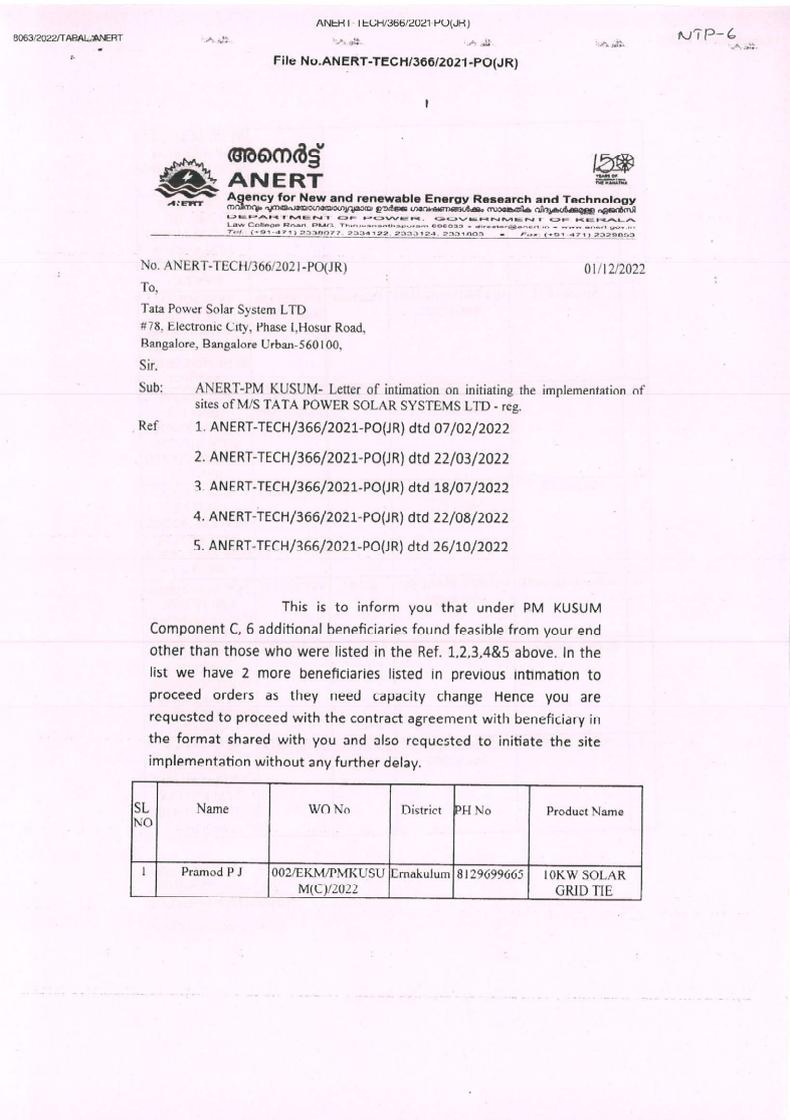
The Chief Engineer (REES) and Chief Safety Commissioner

Copy to:-

TA to Chairman & Managing Director/TA to Director(Gen (Ele) /TA to Director(Dist & IT )/TA to Director (Trans&SO)/TA to Director (Gen-Civil)/TA to Director(Planning,Safety&SCM)/TA to Director(REES,Soura,Sports&Welfare) /PA to Director(Finance)/Sr.CA to (Secretary(Admn))/Company Secretary/Fair Copy Superintendent/ Library/ Stock file.

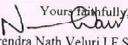
Forwarded by order,

  
Assistant Engineer



## File No.ANERT-TECH/366/2021-PO(JR)

|   |                 |                             |           |                           |                                                                                |
|---|-----------------|-----------------------------|-----------|---------------------------|--------------------------------------------------------------------------------|
|   |                 |                             |           |                           | SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C)                          |
| 2 | Velayudhan.I.V  | 004/EKM/PMKUSU<br>M(C)/2022 | Ernakulam | 9544127439,<br>8848863240 | 3KW SOLAR<br>GRID TIE<br>SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C) |
| 3 | Sivadas KM      | 024/PKD/PMKUSU<br>M(C)/2022 | Palakkad  | 9497883230,<br>9605532375 | 3KW SOLAR<br>GRID TIE<br>SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C) |
| 4 | Aditya Das      | 033/PKD/PMKUSU<br>M(C)/2022 | Palakkad  | 9961810111,<br>7558833000 | 3KW SOLAR<br>GRID TIE<br>SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C) |
| 5 | Rajesh.TR       | 034/PKD/PMKUSU<br>M(C)/2022 | Palakkad  | 9447460672                | 3KW SOLAR<br>GRID TIE<br>SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C) |
| 6 | MadhusoodananRK | 002/IDK/PMKUSU<br>M(C)/2022 | Idukki    | 9447434229                | 5kw Solar System<br>with TP DCR<br>Module 335WP and<br>Power One PCU           |
| 7 | Bruben Abraham  | BMS1710218086812            | Kollam    | 9447596263                | 3KW SOLAR<br>GRID TIE<br>SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C) |
| 8 | Sunny Joseph    | 002/KSD/PMKUSU<br>M(C)/2022 | Kasaragod | 9446959266                | 3KW SOLAR<br>GRID TIE<br>SYSTEM-MODEL<br>2-PM KUSUM<br>SCHEME(COMPO<br>NENT-C) |

Yours faithfully,  
  
 Narendra Nath Veluri I F S  
 Chief Executive Officer



**അനേർട്ട്**  
**ANERT**

**Agency for New and renewable Energy Research and Technology**  
നവീകരണ പുനരുദ്ധനം പുനരുദ്ധനം ഉറപ്പിക്കുന്ന ഗവണ്മെന്റുകൾക്കും സാങ്കേതിക വിദ്യാർത്ഥികൾക്കും എംപ്ലോയ്മെന്റിനും പുനരുദ്ധനം പുനരുദ്ധനം ഉറപ്പിക്കുന്ന ഗവണ്മെന്റുകൾക്കും സാങ്കേതിക വിദ്യാർത്ഥികൾക്കും എംപ്ലോയ്മെന്റിനും  
DEPARTMENT OF POWER, GOVERNMENT OF KERALA  
Law College Road, PMG, Thiruvananthapuram 695033 • director@anert.in • www.anert.gov.in  
Tel: (+91-471) 2338077, 2334122, 2333124, 2331803 • Fax: (+91-471) 2329853



**PROCEEDINGS OF THE CHIEF EXECUTIVE OFFICER**  
(Present: NARENDRA NATH VELURI I F S)

Abstract

ANERT - State subsidy release to M/s. TATA Power Solar Systems Ltd. For the installation of 25 sites under PM KUSUM Component C - orders issued

File no.: ANERT-TECH/150/2022-T4

A.F. No. 1458/2023/ANERT

19-08-2023

Read: 1. MNRE OM No. 32/54/2018-SPV Division dtd 12/01/2021  
2. G.O. (Rt)No.140/2023/POWER Dated 29-07-2023 from POWER Dept.

**ORDER**

MNRE had sanctioned for solarisation of individual pumps (100 Nos) under PM KUSUM Component C as per ref (1). Now M/s. Tata solar power Systems Ltd had completed 25 sites in the State. The concerned district engineers verified site and submitted relevant documents. The subsidy due to M/s. Tata Power Solar Ltd against the sanction cited above is as follows

| Sl no | Name of Beneficiary        | District           | Capacity (KW) | State Subsidy |
|-------|----------------------------|--------------------|---------------|---------------|
| 1     | Sri. Biju Pradeep          | Thiruvananthapuram | 3             | 87548         |
| 2     | Bruben abraham             | Kollam             | 5             | 129888        |
| 3     | Anil Kumar Raghavan Pillai | Kottayam           | 10            | 209946        |
| 4     | Madhusoodhanan R.K.        | Idukki             | 5             | 129888        |
| 5     | K R Raveendran Nair        | Idukki             | 3             | 87548         |
| 6     | Fr. Roy Paul               | Ernakulam          | 5             | 129888        |
| 7     | Benny Joseph Thullisseril  | Ernakulam          | 3             | 87548         |
| 8     | Velayudhan I V             | Ernakulam          | 3             | 87548         |
| 9     | Sri. Ayyavu                | Palakkad           | 7             | 168650        |

|    |                                        |            |    |                |
|----|----------------------------------------|------------|----|----------------|
|    | Dhinesh                                |            |    |                |
| 10 | Sri. E C Jacob                         | Palakkad   | 3  | 87548          |
| 11 | Sri. Shyma<br>Dhinesh                  | Palakkad   | 7  | 168650         |
| 12 | Ambika                                 | Palakkad   | 5  | 129888         |
| 13 | Rajesh T R                             | Palakkad   | 5  | 129888         |
| 14 | Aditya Das                             | Palakkad   | 5  | 129888         |
| 15 | Sri. Faisal K                          | Malappuram | 5  | 129888         |
| 16 | Sri.Paruthikunnan<br>Muhammed<br>Usman | Malappuram | 5  | 129888         |
| 17 | Sri. Mujeeb<br>Rahiman                 | Malappuram | 3  | 87548          |
| 18 | K N<br>Madhusoodhanan                  | Wayanad    | 5  | 129888         |
| 19 | Fr.Varghese CT                         | Kannur     | 7  | 168650         |
| 20 | Sri. Bhaskaran. K                      | Kasargod   | 2  | 66139          |
| 21 | Sri. Sebastian P<br>Augustin           | Kasargod   | 10 | 209946         |
| 22 | Sri. Leo Jose                          | Kasargod   | 3  | 87548          |
| 23 | Sri. Mathew Jose                       | Kasargod   | 10 | 209946         |
| 24 | Sri. Sunny Joseph                      | Kasargod   | 3  | 87548          |
| 25 | Haris M K                              | Kasargod   | 3  | 87548          |
|    | <b>TOTAL</b>                           |            |    | <b>3158851</b> |

Hence sanction is accorded to release the State subsidy amount of Rs. ₹ 31,58,851/- (Rupees Thirty one Lakh fifty eight Thousand eight Hundred and fifty one Only) to M/s. Tata power Solar Ltd. The amount can be met from the Annual plan 2023-24 scheme of ANERT Programmes on Renewable Energy and Renewable Energy Public Engagement outreach, studies and development-under sub head Programs on renewable energy (1.3)- under Head of account

2810-00-800-90-06-35-00.

Above mentioned amount may sent to Account details declared as

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| Name as per Account     | M/s.Tata Power Solar Systems Limited                |
| Name of Bank            | State Bank of India                                 |
| Name of Branch          | IFB, Residency Road Branch, Bengaluru.<br>Karnataka |
| Branch Code             | 9077                                                |
| Account No              | 10503342950                                         |
| IFSC Code for NEFT/RTGS | SBIN0009077                                         |

NARENDRA NATH VELURI I F S  
CHIEF EXECUTIVE OFFICER

1. The District Engineer Concerned  
M/s. Tata power Solar Ltd,
2. Plot No.78, Electronic City, Phase-1, Hosur Road,  
Bangalore, Karnataka — 560100

ഡെപ്യൂസിറ്റ് പദ്ധതി സംബന്ധിച്ച വിശദാംശങ്ങൾ

| ക്രമ. നം. | സ്ഥാപനത്തിന്റെ പേര്       | സോളാർ പ്ലാന്റ് തരം | ശേഷി (കിലോവാട്ട് kW ) | നിലവിലെ സ്ഥിതി                      | തുക (രൂപ)  |
|-----------|---------------------------|--------------------|-----------------------|-------------------------------------|------------|
| 1         | നായരമ്പലം ഗ്രാമപഞ്ചായത്ത് | ഹൈബ്രിഡ്           | 5kW                   | പദ്ധതി 01-02-2023 ൽ കമ്മീഷൻ ചെയ്തു  | 7,11,648/- |
| 2         | ജി.യു.പി.എസ് എടവനക്കാട്   | ഓൺ ഗ്രിഡ്          | 3kW                   | പദ്ധതി 01-10-2022 ൽ കമ്മീഷൻ ചെയ്തു  | 1,71,788/- |
| 3         | ഞാറക്കൽ പോലീസ് സ്റ്റേഷൻ   | ഓൺ ഗ്രിഡ്          | 2kW                   | പദ്ധതി 26-03-2022 ൽ കമ്മീഷൻ ചെയ്തു  | 90,634/-   |
| 4         | മുളവുകാട് പോലീസ് സ്റ്റേഷൻ | ഓൺ ഗ്രിഡ്          | 2kW                   | പദ്ധതി 05-06 -2022 ൽ കമ്മീഷൻ ചെയ്തു | 90,634/-   |

| <b>SL No.</b> | <b>Name of Project</b>   | <b>Plant Type</b> | <b>Capacity</b> | <b>Status</b> | <b>Amount</b> | <b>Commissioning date</b> |
|---------------|--------------------------|-------------------|-----------------|---------------|---------------|---------------------------|
| 1             | Nayarambalam GP          | Hybrid            | 5kW             | Completed     | 711648        | 1/2/2023                  |
| 2             | GUPS Edavanakad          | On Grid           | 3kW             | Completed     | 171788        | 1/10/2022                 |
| 3             | Njarakkal Police Station | On Grid           | 2kW             | Completed     | 90634         | 26/3/2022                 |
| 4             | Mulavukad Police Station | On Grid           | 2kW             | Completed     | 90634         | 5/6/2022                  |



# ANERT

Agency for New and Renewable Energy Research and Technology

(Power Department, Government of Kerala)

**District Office, Ernakulam**

No. No : 76/5PV/ANERT/EKM/2022

17/09/2022

## WORK ORDER

From,

District Project Engineer  
ANERT District Office,  
Ernakulam

To

Power one Micro systems, RR Building, No.481651 F2,  
2<sup>o</sup> Floor, South Keerthi Nagar Lane, Deshabhimani  
Road, Keerthi Nagar, Elamakkara (PO) Kochi - 26,  
Ph. 0484210231 t, 2530633

Sir,

**Sub** : ANERT District Office, Ernakulam—Order for the Supply, installation and commissioning of **5kW Hybrid Solar Power Plant at Nayarambalam Grama Panchayath**

**Ref** : 1. E-Tender ID: -2021\_ANERT\_441035\_1

2 Tender No.2021\_ANERT\_441035\_1

Attention is invited to the references cited. Your offer for the supply, installation and commissioning of 3kW Hybrid solar Power Plant installation at **Nayarambalam Grama Panchayath** Building is accepted. You are requested to carry out the work as detailed below subject to the following terms and conditions.

| Sl. No | Item                                                                                                                                          | Amount<br>(inclusive GST and all other expenses)                                       |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1      | Supply, Installation & Commissioning of 5kW Hybrid Solar Power Plant(3Hr backup) with VRLA GEL Battery at State Nayarambalam Grama Panchayath | <b>Rs.6,69,648/-</b>                                                                   |
|        | Additional Structure Work.                                                                                                                    | <b>₹42,000/-</b>                                                                       |
|        | <b>Total</b>                                                                                                                                  | <b>7,11,648/-</b> (Rupees Seven Lakh Eleven Thousand Six Hundred and Forty Eight Only) |

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam-682030. Ph:0484-2428611 Email : ernakulam@anert.in**



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

**District Office, Ernakulam**

1. Supply of the main component such as Solar module, PCU, should be effected as per makes and models offered with the tender and approved by ANERT.
2. The Price shown above inclusive GST

An agreement has to be executed by you in the prescribed form (enclosed) on Kerala Stamp paper worth Rs. 200/- within a week time for the fulfillment of the contract along with a security deposit of **Rs.21,349/- (Rupees Twenty One Thousand Three Hundred and Forty Nine Only)** being the 3% of contract value of **Rs.7,11,648/-** on Demand Draft in favor of Director/ District Project Engineer Ernakulam, ANERT. You have to pay all expenses incidental to the execution of the above agreement

### **Schedule of Supply, Installation & Commissioning:**

- i) The items should be delivered and installed at the Roof top of **Nayarambalam Grama Panchayath, Ernakulam** Building as mentioned below as specified by ANERT, under prior intimation and supervision of ANERT.
- ii) The Supply, Installation and Commissioning of the entire system shall be completed within 60 days of the date of supply order. This is the time period for handing over the system after commissioning to ANERT and no time extension in this regard without valid reasons will be entertained.
- iii) The installation must be completed within 60 days of the date of supply order and must be properly informed to the work order issuing authority.
- iv) Supply of the main components such as SPV module, PCU, Battery and charge controller should be from the approved component list published in ANERT Website.
- v) Penalty for delay in supply and installation will be imposed at 0.5 % per week up to a maximum 10 %. In case of delay in supply and installation, Director, ANERT may cancel the contract and take recourse to other action as deemed appropriate.

### **7. ACCEPTANCE, AGREEMENT AND PERFORMANCE SECURITY**

- a. The Agencies above, are to enter into an agreement with ANERT within 7 days from the issue of this order in the format of agreement attached as Annexure – I.
- b. The rates finalised from this Rate contract will be valid for a period of 1 year and shall be used for all installations made through the various schemes of ANERT all



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(Power Department, Government of Kerala)

## **District Office, Ernakulam**

over Kerala. This includes the installations under Plan schemes, Deposit Works and other installations under ANERT 2020 scheme (Commercial consumers). Individual work orders shall be issued for the installations under all schemes.

- c. Individual work order for each work shall be issued from ANERT District Offices / ANERT HQ and the bidders shall remit an amount @ 3% of the contract value, as security deposit in terms of Bank Guarantee/Deposit having validity for 3 months from the issue of work order.
- d. The bank guarantee(s)/deposit(s) will be released/refunded to the bidder after completion of the work, after deducting the penalties if any.
- e. ANERT reserves the right to float individual tenders, if required for the above works depending on site requirements and nature of additional works required.

## **2. SCHEDULE OF SUPPLY**

- a. The individual installation work orders shall be placed from the ANERT District Offices / ANERT HQ separately for each installation after conducting a joint site visit to evaluate any additional site-specific costs if any.
- b. The Supply, Installation and Commissioning of each system shall be completed within **60 days from the date of each supply order**. This is the time period for handing over the system after commissioning to ANERT/beneficiary and no time extension in this regard without valid reasons will be entertained.
- c. Penalty for delay in supply and installation will be imposed at 0.5 % per week up to a maximum 10%. In case of delay in supply and installation, CEO, ANERT may cancel the contract and take recourse to other action as deemed appropriate.

## **SUPPLY AND INSTALLATION OF THE POWER PLANT**

- a. Only the PV modules available in the ALMM list issued by MNRE vide order No. F. No. 283/54/2018-GRID Solar – Part (1) dtd 17/08/2021 and future revisions made by MNRE from time to time shall be used.
- b. The installation work of the Solar power plant must be in compliance with the Technical Requirements and Standards as mentioned in the Tender.
- c. The additional works/requirements at each individual site if any to be decided upon after a joint site visit by the agency and representative of ANERT district

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam-682030. Ph: 0484-2428611 Email : ernakulam@anert.in**



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office.

- d. The agencies to provide the list of inverters and battery being used for the project along with the test reports and certifications mentioned in the tender document for approval along with the agreement submission.

## **PAYMENT**

4.1 No advance payment will be given. All the documents submitted should be certified by the concerned District Office of ANERT. This will be applicable for works issued through individual work order for installations done through Plan and Deposit work scheme of ANERT.

4.2 The terms of payment shall be:

- i. 2.5 % of the invoice amount shall be charged by ANERT as non-refundable license fee and the remaining amount shall be treated as contract value for further payment.
- ii. Upon delivery of major components (PV Modules, Inverter, Battery etc) at the respective sites, 30 % of the contract value will be released as first part payment, if requested. The supplier shall submit the invoice for the materials (including serial numbers and delivery chalan) duly certified by the concerned District Office along with a report regarding the supply of materials.
- iii. On completion of the installation of power plant and filing application for connectivity with the electrical utility, 40% of the contract value shall be released as second part payment. The supplier shall submit the invoice for the materials supplied and all documents related including the Project Completion Report (Format attached as Annexure - II) to the completion of the work certified by the district office shall be submitted for the release of the amount. The PCR submitted will be used for conducting the pre-commissioning tests.
- iv. On commissioning of the grid connected system, 30% of the remaining contract value will be released. All documents related to the completion of the work including commissioning report and commissioning certificate issued by the electrical utility shall be submitted for the release of the amount.
- v. The remaining 10% shall be retained as performance security and will be released as given below. This period will be considered only from the date of commissioning.
  - a. 50% of performance security shall be paid after one year on request along with the preventive maintenance reports.

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam-682030. Ph: 0484-2428611 Email : [ernakulam@anert.in](mailto:ernakulam@anert.in)**



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**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

**District Office, Ernakulam**

- b. The remaining 50% shall be paid after the five-year warranty period on request along with the preventive maintenance reports for the 5 years.
- 4.3 Income tax, contribution to workers' welfare fund and other statutory deductions shall be made from the payment as per prevailing norms.

## **WARRANTY**

- i. 5 years' warranty should be provided by the supplier for the system and components or part of the system has to be provided
- ii. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90 % at the end of 10 years and 80% at the end of 25 years
- iii. The Warranty Card of the total system issued by the agency and the warranty issued by OEMs for PV Modules, Battery & Solar Inverter must be handed over to the beneficiary along with a copy to ANERT district office. The warranty card issued by the vendor should include all the details of the system supplied including serial Nos.

## **OPERATION MANUAL**

- i. An Operation, Instruction and Maintenance Manual, in English and Malayalam should be provided with the system.
- ii. The following minimum details must be provided in the manual:
  - a. About solar power plant – its components and expected performance.
  - b. About PV module
  - c. About electronics
  - d. About charging and significance of indicators
  - e. DO's and DON'T's
  - e. Clear instructions on regular maintenance and troubleshooting of solar power plant
  - f. Name and address of the contract person in case of non-functionality of the solar power plant.
  - g.

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam-682030. Ph:0484-2428611 Email : ernakulam@anert.in**



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## **SERVICE AND MAINTENANCE**

- i. The faulty system or components should be replaced/ repaired within 7 days of fault reporting. The servicing should be carried out at the site of installation.
- ii. The service personnel should visit the installations at least once in 4 months for preventive maintenance (format attached as annexure – III) even if no faults are reported. **Agency should keep report of these preventive maintenance visit signed by beneficiary and submit before the concerned ANERT District Office on a quarterly basis.**
- iii. Any Delay in servicing beyond 10 days of fault reporting would attract penalty at the rate of at the rate fixed by Director, ANERT and further actions will be initiated against the agency.
- iv. A designated contact Telephone Number and address should be submitted for reporting faults during the warranty period.

## **INSURANCE**

- i. The power plant must be insured at every stage of operation – from Material dispatch, storage, completion of installation and till 5 years after commissioning.
- ii. The insurance coverage on handing over of the system must include all conditions of **Standard Fire and Special Perils Policy (Material Damage)**. The insurance premium for the 5 years of warranty is to be paid by the vendor.
- iii. On handing over of the system, the original insurance policy is to be handed over to the beneficiary and a copy to ANERT District Office.

## **RATES FOR SITE SPECIFIC COMPONENTS**

**Schedule of rates for additional works:** (due to the requirement of special design):

The Rates of additional electrical work within the premises will be decided at par rates of Delhi Schedule of Rates (DSR), for Electrical works, Central Public Works Department, amended from time to time; The rates of additional civil work shall be as per at par the rates of Delhi Schedule of Rates (DSR) for building works, Central Public Works Department, amended from time to time. The Cost index applicable for each location as decided by GoK will be applicable while finalising such additional rates to be included in the work order.

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682030. Ph: 0484-2428611 Email : ernakulam@anert.in**



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

## District Office, Ernakulam

No. 110-5/SSA-2/DW/ANERT/EKM/2020

19/03/2022

### WORK ORDER

From,

District Engineer  
ANERT District Office  
Ernakulam.

To

|                    |                                                                            |
|--------------------|----------------------------------------------------------------------------|
| Name of the Agency | <b>M/s. Kondaas Automation Ltd</b>                                         |
| Address            | # 5 B, Sri. Alamelunagar, Kamarajar Road,<br>Coimbatore, Tamilnadu- 641015 |

Sir,

1. Sub: ANERT District Office, Ernakulam – Order for the Supply, installation, and commissioning of a **3kWp On-grid Solar Power Plant** with a 5-year warranty at **GUPS Edavanakkad, Ernakulam-Reg.**

- Ref: 1. Tender Id:- 2021\_ANERT\_422830\_2  
2. Your Bid dt. 05/08/2021  
3. A. O No. 81/2021/ANERT. dtd.25/08/2021

Attention is invited to the references cited. As per reference (3) cited above a revised work order for the supply, installation, and commissioning of a **3kWp On-grid Solar Power Plant with a 5-year warranty at GUPS Edavanakkad, Ernakulam** is accepted. You are requested to carry out the work as detailed below subject to the following terms and conditions

| Sl. No | Item                                                                                                                                      | Amount<br>(inclusive GST and all other expenses)                                              |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 1      | Supply, Installation & Commissioning of <b>3kWp On-grid Solar Power Plant</b> with 5 years warranty at <b>GUPS Edavanakkad, Ernakulam</b> | <b>Rs.1,64,739/-</b> (Rupees One Lakh Sixty-Four Thousand Seven Hundred and Thirty-Nine only) |

The approved components by ANERT only should be used for the installation of the power plant.

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam- 682030.**  
Ph:0484-2428611 Email : [ernakulam@anert.in](mailto:ernakulam@anert.in)



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

## District Office, Ernakulam

1. An agreement has to be executed by you in the prescribed form (enclosed) on Kerala Stamp paper worth Rs.200/- within a week for the due fulfillment of the contract along with a security deposit of **Rs.4,942/-** being the 3% of the contract value of **Rs.1,64,739/-** as Demand Draft/ Bank Guarantee in favor of District Engineer, Ernakulam. You have to pay all stamp duty, Lawyers charges, and other expenses, if any incidental to the execution of the above agreement, in favor of District Engineer, Ernakulam.

### 2. Schedule of Supply, Installation & Commissioning:

- i. The item should be delivered and installed at the rooftop of the site of installation as specified by ANERT, under prior intimation and supervision of ANERT. Any additional job/ material will be considered as actual.
- ii. The Supply, installation, and commissioning of the power plant shall be **completed within 45 days from the date of the work order.**
- iii. Supply of the main components such as solar module, Grid-tied inverter should be within the approved list of ANERT. Only the PV modules are available in the ALMM list issued by MNRE vide order. F. No. 283/54/2018-GRID Solar-Part (1) dtd. 17/08/2021 and future revisions made by MNRE from time to time shall be used.
- iv. Penalty for delay in supplies will be imposed at 0.5% per week up to a maximum of 10%. In case of delays in supplies, District Engineer, Thiruvananthapuram may cancel the contract and take recourse to other action as deemed appropriate.
- v. The bidder should submit and get the necessary approval from ANERT for all Engineering Drawings before starting the installation, deviations if any.
- vi. The responsibility of taking approval from the Distribution licensee & Electrical Inspectorate should be under the scope of the bidder.

### 3. Payment

1. No advance payment will be given. Payment will be released on receipt of invoices and successful installation and commissioning of the power plant certified by the concerned District Office of ANERT.
2. The terms of payment shall be:
  - a) 2.5 % of the invoice amount shall be charged by ANERT as non-refundable license fee
  - b) Upon delivery of major components (PV modules, Inverter, and structure) at sites and production of the invoice for the supply of materials 30% of the contract value will be released as first part payment. On completion of the power plant and filing application for connectivity, 30% of the contract value of that power plant shall be released as a second part payment. The supplier shall submit the invoice for the material supplied and all documents related including the project completion report Format Annexure-IV). On commissioning of the grid-connected system, 30% will be released, after submission of commissioning report and commissioning certificate issued by the electrical utility.
  - c) The remaining 10% shall be retained as performance security as given below. The performance security shall not be released against the bank guarantee.
  - d) 50% of the performance security shall be paid after one year on request along with 4nos preventive maintenance reports.

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam- 682030.**

**Ph:0484-2428611 Email : ernakulam@anert.in**



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

## District Office, Ernakulam

e) The remaining 50% shall be paid after the five-year warranty period, on request along with preventive maintenance reports.

f) The security deposit of 5% furnished along with the contract agreement shall be released on completion of the supply, installation, and commissioning.

3. Income tax, contribution to workers' welfare fund, and other statutory deductions shall be made from the payment as per prevailing norms.

#### 4. Warranty:

i. 5 year's warranty should be provided by the supplier for the system and components or part of the system have to be provided.

ii. The warranty card of the total system issued by the agency and the warranty issued by OEMs for the PV module & solar inverter must be handed over to the beneficiary along with a copy to ANERT district office. The warranty card issued by the vendor shall include all the details of the system supplied including serial nos.

#### 5. Operation Manual:

i. An operation, instruction, and maintenance manual in English and Malayalam should be provided with the system.

ii. The following minimum details must be provided in the manual;

- a. About solar power plants-its components and expected performance
- b. About PV module
- c. About electronics
- d. About charging and significance of indicators
- e. DO's and DON'T's
- f. Clear instruction on regular maintenance and troubleshooting of solar power plant.
- g. Name and address of the contact person in case of non-functionality of the solar power plant.

#### 6. Insurance

i. The power plant must be insured at every stage of operation- from Material despatch, storage, completion of installation, and till 5 years after commissioning.

ii. The insurance coverage on handing over the system must include all conditions of **standard Fire and Special Perils Policy (Material Damage)**. The insurance premium for the 5years of warranty is to be paid by the vendor.

iii. On handing over of the system, the original insurance policy is to be handed over to the beneficiary and a copy to the ANERT District Office.

#### 7. Service & Maintenance:

i. The faulty device should be replaced/ repaired within 07 days of fault reporting. The servicing should be carried out at the sites of installation. The service personnel should visit the installation at least once in three months for preventive maintenance even if no faults are reported. **Agency should keep a report of these preventive maintenance visits signed by the beneficiary and submit it before the concerned ANERT District Offices if required.**

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam- 682030.**

**Ph:0484-2428611 Email : ernakulam@anert.in**



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

## District Office, Ernakulam

ii. A designated contact telephone Number and address should be given for both beneficiary and ANERT for reporting faults during the warranty period.

**8. Installation:** The installation work of the Solar Power Plant will be done as per tender conditions.

**9.** A display board (size 30 cm x 20 cm) should be displayed showing that 'Deposit Work Scheme 2021-22, ANERT, Govt. of Kerala'

Yours faithfully

District Engineer  
ANERT District Office,  
Ernakulam.

Encl: Agreement Format

- Copy to
1. Director, ANERT
  2. Beneficiary Institution
  3. Office Copy

District Engineer  
District ANERT Office  
Ernakulam



**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam- 682030.**

**Ph:0484-2428611 Email : ernakulam@anert.in**



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

**District Office, Ernakulam**

No. 110-5/SSA-2/DW/ANERT/EKM/2020

13/07/2022

From,

District Engineer  
ANERT, Ernakulam

To,

M/s. Kondaas Automation Ltd  
# 5 B, Sri. Alamelunagar,  
Kamarajar Road,  
Coimbatore,  
Tamilnadu- 641015

Sir,

Sub : ANERT District Office, Thiruvananthapuram –Installation and commissioning of a **3kWp** On-grid Solar Power Plant with a 5-year warranty at **GUPS Edavanakkad, Vypin** - Supply order for Additional Structure Work -Reg.

Ref : (1) Tender No: 2021\_ANERT\_422830\_2  
(2) Your Bid date 05/08/2021  
(3) A. O No. 81/2021/ANERT. dated .25/08/2021  
(4) WO 110-5/SSA-2/DW/ANERT/EKM/2020 dated 19/03/2022

Attention is invited to the references cited. Your offer for **Additional Work** of 3kWp On-Grid SPV Power Plant at **GUPS Edavanakkad, Vypin, Ernakulam** District is accepted. You are requested to carry out the work as detailed below subject to the following terms and conditions.

| S/No | Location                       | Items                                           | Amount (inclusive GST and all other expenses)              |
|------|--------------------------------|-------------------------------------------------|------------------------------------------------------------|
| 1.   | <b>GUPS Edavanakkad, Vypin</b> | Additional Material Cost as per sites condition | <b>₹7049/-</b> (Rupees Seven Thousand and Forty-Nine Only) |

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam-682030.Ph:0484-2428611 Email : ernakulam@anert.in**



# ANERT

**Agency for New and Renewable Energy Research and Technology**

(Power Department, Government of Kerala)

**District Office, Ernakulam**

## Terms & Conditions

1. Supply of the instruments shall be completed within **7 days from the date of supply order.**
2. A single invoice should be submitted for Project.
3. No Increase in contract amount is allowed.
4. Materials as per the specification should only be used for the work. Necessary handrails/ bars should be used where ever it is required.
5. Safety measures for the Labor/ material/ equipment are the responsibility of the contractor.
6. Work should be carried out without causing any damage to the existing roof/ structure.
7. Wastage materials should be removed from the premises immediately after work and disposed off at your own cost.
8. Payment will be made after completing the work satisfactorily.
9. Statutory deductions such as income tax TDS, etc will be done as per the existing rules.



Yours faithfully

District Engineer

ANERT District Office, Ernakulam

District ANERT Office  
Ernakulam

Encl: Agreement Format

- Copy to
1. Director, ANERT
  2. (Beneficiary Institution)
  3. Office Copy

**Asoka Apartments, Civil Lane Road-3, Near Civil Station, Kakkanad, Ernakulam-682030. Ph:0484-2428611 Email : ernakulam@anert.in**



അനേർട്ട്  
ANERT



Agency for New and Renewable Energy Research and Technology

നവീനവും പുനരുപയോഗയോഗ്യവുമായ ഊർജ്ജ ഗവേഷണങ്ങൾക്കും സാങ്കേതിക വിദ്യകൾക്കുമുള്ള ഏജൻസി  
(Department of Power, Government of Kerala)

No. ANERT-TECH/5/2020-PO(JR)

15/10/2020

To

**M/s Alternate Energy Corporation**  
**MC Road, Angamaly**  
**Ernakulam - 683572**

**WORK ORDER**

Sir,

Sub: ANERT- Work Order for Design, Supply, Installation and Commissioning of Grid Connected SPV Power Plant at 19 buildings of Kerala Police in Ernakulam District for a cumulative capacity of 83kW under Plan scheme 2019-20 - reg

- Ref:
1. Tender ID: 2020\_ANERT\_364456\_1
  2. Your Bid No. 916928 dtd 30/07/2020
  3. Work Order No. ANERT-TECH/5/2020-PO(JR) dtd 03/09/2020

Attention is invited to the references cited. Your offer for the Design, Supply, Installation and Commissioning of Grid Connected SPV Power Plant for a cumulative capacity of 307 kWp at 54 buildings under Kerala Police in Ernakulam District of Kerala was accepted and work order for 21 sites were issued vide reference cited 3<sup>rd</sup>. The work order for further 19 sites are issued herewith. You are requested to carry out the work as detailed below subject to the following terms and conditions.

| # | Site of Instalation         | Capacity (kW) | Rate     | Tax       | Total    |
|---|-----------------------------|---------------|----------|-----------|----------|
| 1 | Crime Bureau Records, Aluva | 10            | 4,14,990 | 38,179.08 | 4,53,169 |
| 2 | Cheranellore Police Station | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 3 | Panangadu Police Station    | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 4 | Maradu Police Station       | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 5 | Thrikkakara Police Station  | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 6 | Kothamangalam PS            | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 7 | Kottappady Police Station   | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 8 | Kunnathunadu Police Station | 5             | 2,07,495 | 19,089.54 | 2,26,585 |

**File No.ANERT-TECH/5/2020-PO(JR)**

|                                                                                  |                            |   |          |           |                  |
|----------------------------------------------------------------------------------|----------------------------|---|----------|-----------|------------------|
| 9                                                                                | Thadiyittaparambu PS       | 5 | 2,07,495 | 19,089.54 | 2,26,585         |
| 10                                                                               | Unnukal Police Station     | 5 | 2,07,495 | 19,089.54 | 2,26,585         |
| 11                                                                               | Koothattukulam PS          | 5 | 2,07,495 | 19,089.54 | 2,26,585         |
| 12                                                                               | Perumbavoor Police Station | 5 | 2,07,495 | 19,089.54 | 2,26,585         |
| 13                                                                               | Ramamangalam PS            | 3 | 1,24,497 | 11,453.72 | 1,35,951         |
| 14                                                                               | Vazhakkulam Police Station | 3 | 1,24,497 | 11,453.72 | 1,35,951         |
| 15                                                                               | Police Museum, Mattanchery | 3 | 1,24,497 | 11,453.72 | 1,35,951         |
| 16                                                                               | ACP Office, Mattanchery    | 3 | 1,24,497 | 11,453.72 | 1,35,951         |
| 17                                                                               | Njarakkal Police Station   | 2 | 82,998   | 7,635.82  | 90,634           |
| 18                                                                               | Varapuzha Police Station   | 2 | 82,998   | 7,635.82  | 90,634           |
| 19                                                                               | Puthenvelikkara PS         | 2 | 82,998   | 7,635.82  | 90,634           |
| <b>TOTAL</b>                                                                     |                            |   |          |           | <b>37,61,310</b> |
| <b>(Rupees Thirty-Seven Lakhs Sixty One Thousand Three Hundred and Ten only)</b> |                            |   |          |           |                  |

*Amount inclusive of Taxes, Cess, Statutory Deductions, and all other expenses)*

An agreement has to be executed by you in the prescribed form (enclosed as Annexure - I) on Kerala Stamp paper worth Rs. 200/- within 15 days of the receipt of this work order for the fulfilment of the contract along with a security deposit of Rs. **1,88,066 /-(Rupees One Lakh Eighty-Eight Thousand and Sixty Six only)** being the 5 % of contract value of Rs. **37,61,310 /-** on Demand Draft/Bank Guarantee in favour of Director, ANERT. You have to pay all expenses incidental to the execution of the above agreement.

**1. SCOPE OF WORK**

The scope covers supply, installation and commissioning of **Solar Power Plants with Grid Connectivity at the 54 sites including the additional works mentioned below:**

| # | Site of Instalation         | Capacity (kW) | Additional Work       |
|---|-----------------------------|---------------|-----------------------|
| 1 | Crime Bureau Records, Aluva | 10            |                       |
| 2 | Cheranellore Police Station | 5             | Conversion to 3 Phase |
| 3 | Panangadu Police Station    | 5             |                       |
| 4 | Maradu Police Station       | 5             |                       |
| 5 | Thrikkakara Police Station  | 5             |                       |
| 6 | Kothamangalam PS            | 5             | Conversion to 3 Phase |

|    |                             |   |                       |
|----|-----------------------------|---|-----------------------|
| 7  | Kottappady Police Station   | 5 | Conversion to 3 Phase |
| 8  | Kunnathunadu Police Station | 5 |                       |
| 9  | Thadyittaparambu PS         | 5 | Conversion to 3 Phase |
| 10 | Unnukal Police Station      | 5 | Conversion to 3 Phase |
| 11 | Perumbavoor Police Station  | 5 | Conversion to 3 Phase |
| 12 | Koothattukulam PS           | 5 |                       |
| 13 | Ramamangalam PS             | 3 |                       |
| 14 | Vazhakkulam Police Station  | 3 |                       |
| 15 | Police Museum, Mattanchery  | 3 |                       |
| 16 | ACP Office, Mattanchery     | 3 |                       |
| 17 | Njarakkal Police Station    | 2 |                       |
| 18 | Varapuzha Police Station    | 2 |                       |
| 19 | Puthenvelikkara PS          | 2 |                       |

Each and every site need to be provided the following:

- i. Provision for cleaning of PV modules – a Water tank of Minimum 200 litre capacity to be installed at appropriate height.
- ii. A Monoblock pump of appropriate capacity (Min 1 HP) as per the source of water.
- iii. All plumbing and civil works associated with the above;
- iv. Permanent ladder facility with hand-rails to access the roof of the building (in case there is no permanent facility available as of now).
- v. Additional structural work wherever required in addition to the site mentioned in the above table. All additional structural work done must be provided with pathway and hand-rail facility for access to PV modules for cleaning.

## 2. SCHEDULE OF SUPPLY

- i. The items should be delivered and installed at the Roof top of buildings as mentioned above under the Kerala Police (43 Police Stations & 11 Offices) in Ernakulam District as specified by ANERT, under prior intimation and supervision of ANERT.
- ii. The Supply, Installation and Commissioning of the entire system shall be completed within **6 months of the date of supply order**. This is the time period for handing over the system to ANERT with Grid connectivity and no time extension in this regard without valid reasons will be entertained.
- iii. The installations must be completed within **5 months of the date of supply order** and must be properly informed to the work order issuing authority.
- iv. Supply SPV module, should be from the approved component list published in

ANERT Website. The detailed Bill of Material for each of the site must be provided in advance before the dispatch of materials to each site.

- v. The additional works/requirements at each individual site as mentioned in the Tender and the corrigendum issued thereafter need to be completed.
- vi. Penalty for delay in supply and installation will be imposed at 0.5 % per week up to a maximum 10 %. In case of delay in supply and installation, Director, ANERT may cancel the contract and take recourse to other action as deemed appropriate.

### 3. INSTALLATION

- i. The installation work of the Solar power plant must be in compliance with the Technical Requirements and Standards as mentioned in the Tender
- ii. A display board (size 30cm x 20cm) should be displayed with contents attached in annexure - II is to be placed at all the 54 sites.

### 4. PAYMENT

A. No advance payment will be given. Payment will be released on receipt of invoices and successful installation and commissioning of power plant along certified by the District Office of ANERT.

B. The terms of payment shall be:

- i. 2.5 % of the invoice amount shall be charged by ANERT as non-refundable license fee and the remaining amount shall be treated as contract value for further payment.
- ii. Upon delivery of items at all sites, 30 % of the contract value will be released as first part payment, if requested. The supplier shall submit the invoice for the materials supplied duly certified by the concerned District Office along with a report regarding the supply of materials.
- iii. On completion of the installation of the power plant and filing application for connectivity, 60% of the contract value (another 30% of the contract value, if first part payment is made) shall be released as first (second) part payment. All documents related to the completion of the work (including application filed at Distribution licensee) certified by the District office shall be submitted for the release of the amount.
- iv. On commissioning of the grid connected system, 30% of the remaining contract value will be released. All documents related to the completion of the work including commissioning report shall be submitted for the release of the amount.
- v. The remaining 10% shall be retained as performance security and will be released as given below.
  - a. 50% of performance security shall be paid after one year on request along

with the preventive maintenance reports.

b. The remaining 50% shall be paid after the five-year warranty period on request along with the preventive maintenance reports for the 5 years.

c. Performance security shall not be released against bank guarantee.

vi. This Performance security shall be released on submission of Bank Guarantee of equivalent amount valid for a period of 5 years. This will be returned only after completion of warranty period.

vii. The security deposit of 5% furnished along with the contract agreement shall be released on successful completion of supply, installation and commissioning.

C. Income tax, contribution to workers' welfare fund and other statutory deductions shall be made from the payment as per prevailing norms.

#### 5. WARRANTY

- i. 5 years' warranty should be provided by the supplier for the system and components or part of the system has to be provided
- ii. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90 % at the end of 10 years and 80% at the end of 25 years
- iii. The Warranty Card to be supplied with the system must contain the details of the system supplied.

#### 6. OPERATION MANUAL

- i. An Operation, Instruction and Maintenance Manual, in English and Malayalam should be provided with the system.
- ii. The following minimum details must be provided in the manual:
  - a. About solar power plant - its components and expected performance.
  - b. About PV module
  - c. About electronics
  - d. About charging and significance of indicators
  - e. DO's and DON'T's
  - f. Clear instructions on regular maintenance and troubleshooting of solar power plant
  - g. Name and address of the contract person in case of non-functionality of the solar power plant.

#### 7. SERVICE AND MAINTENANCE

- i. The faulty system or components should be replaced/ repaired within 10 days of

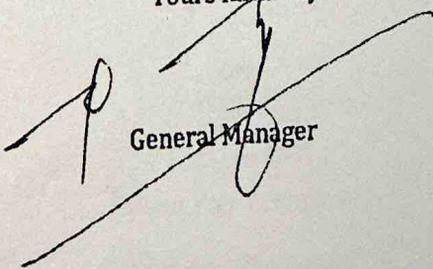
fault reporting. The servicing should be carried out at the site of installation. The service personnel should visit the installations at least once in 4 months for preventive maintenance even if no faults are reported. **Agency should keep report of these preventive maintenance visit signed by beneficiary and submit before the concerned ANERT District Office on annual basis.**

- ii. Any Delay in servicing beyond 10 days of fault reporting would attract penalty at the rate of at the rate fixed by Director, ANERT and further actions will be initiated against the agency.
- iii. A designated contact Telephone Number and address should be submitted for reporting faults during the warranty period.

#### 8. INSURANCE

The power plant must be insured at every stage of operation - from Material dispatch, storage, completion of installation and till 5 years after commissioning. The insurance coverage on handing over of the system must include all conditions of **Standard Fire and Special Perils Policy (Material Damage)**. The insurance premium for the 5 years of warranty is to be paid by the bidder. On handing over of the system, the original insurance policy is to be handed over to the authorised person at the site of installation and a copy to ANERT District Office. The annual premium payment receipt must be handed to the authorised person at the site of installation and a copy to the concerned District Office of ANERT.

Yours faithfully

  
General Manager



**അനേർട്ട്**  
**ANERT**

Agency for New and renewable Energy Research and Technology  
നവീകരണ പുനരധാരാഗതയാഗ്യമായ ഊർജ്ജ ഗവേഷണങ്ങൾക്കും സാമ്പത്തിക വിദ്യുച്ഛക്തികളുടെ എടുപ്പിനും  
DEPARTMENT OF POWER, GOVERNMENT OF KERALA  
Law College Road, PMG, Thiruvananthapuram 695033 • director@anert.in • www.anert.gov.in  
Tel.: (+91-471) 2338077, 2334122, 2333124, 2331803 • Fax: (+91-471) 2329853



No. ANERT-TECH/5/2020-PO(JR)

23/12/2020

To

**M/s Alternate Energy Corporation**  
**MC Road, Angamaly**  
**Ernakulam - 683572**

**WORK ORDER**

Sir,

Sub: ANERT- Work Order for Design, Supply, Installation and Commissioning of Grid Connected SPV Power Plant at 10 buildings of Kerala Police in Ernakulam District - Phase 3 - reg

- Ref:
1. Tender ID: 2020\_ANERT\_364456\_1
  2. Your Bid No. 916928 dtd 30/07/2020
  3. Work Order Phase 1 dtd 3/9/2020
  4. Work Order Phase 2 dtd 15/10/2020

Attention is invited to the references cited. Your offer for the Design, Supply, Installation and Commissioning of Grid Connected SPV Power Plant at 10 buildings under Kerala Police in Ernakulam District of Kerala is accepted. You are requested to carry out the work as detailed below subject to the following terms and conditions.

| # | Site of Instalation         | Capacity (kW) | Rate     | Tax       | Total    |
|---|-----------------------------|---------------|----------|-----------|----------|
| 1 | Kannamaly Police Station    | 10            | 4,14,990 | 38,179.08 | 4,53,169 |
| 2 | Kalamassery Police Station  | 10            | 4,14,990 | 38,179.08 | 4,53,169 |
| 3 | Angamaly Police Station     | 10            | 4,14,990 | 38,179.08 | 4,53,169 |
| 4 | Kalady Police Station       | 10            | 4,14,990 | 38,179.08 | 4,53,169 |
| 5 | Mulanturuthy Police Station | 10            | 4,14,990 | 38,179.08 | 4,53,169 |
| 6 | Ambalamedu Police Station   | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 7 | Kodanaad (Kurichilakode) PS | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 8 | Dy SP Office, Muvattupuzha  | 5             | 2,07,495 | 19,089.54 | 2,26,585 |
| 9 | ACP Office, Thrikkakara     | 3             | 1,24,497 | 11,453.72 | 1,35,951 |

|                                                                                      |                           |   |        |          |                  |
|--------------------------------------------------------------------------------------|---------------------------|---|--------|----------|------------------|
| 10                                                                                   | Mulavukadu Police Station | 2 | 82,998 | 7,635.82 | 90,634           |
| <b>TOTAL</b>                                                                         |                           |   |        |          | <b>31,72,185</b> |
| <b>Rupees Thirty-One Lakhs Seventy-Two Thousand One Hundred and Eighty Five only</b> |                           |   |        |          |                  |

An agreement has to be executed by you in the prescribed form (enclosed as Annexure - I) on Kerala Stamp paper worth Rs. 200/- within 15 days of the receipt of this work order for the fulfilment of the contract along with a security deposit of Rs. 1,58,610 /-(Rupees One Lakh Fifty-Eight Thousand Six Hundred and Ten only) being the 5 % of contract value of Rs. 31,72,185 /- on Demand Draft in favour of Director, ANERT. You have to pay all expenses incidental to the execution of the above agreement.

### 1. SCOPE OF WORK

The scope covers supply, installation and commissioning of Solar Power Plants with Grid Connectivity at the 10 sites including the additional works mentioned below:

| #  | Site of Instalation         | Capacity (kW) | Additional Work       |
|----|-----------------------------|---------------|-----------------------|
| 1  | Kannamaly Police Station    | 10            | Conversion to 3 Phase |
| 2  | Kalamassery Police Station  | 10            |                       |
| 3  | Angamaly Police Station     | 10            | Conversion to 3 Phase |
| 4  | Kalady Police Station       | 10            | Conversion to 3 Phase |
| 5  | Mulanturuthy Police Station | 10            |                       |
| 6  | Ambalamedu Police Station   | 5             |                       |
| 7  | Kodanaad (Kurichilakode) PS | 5             | Conversion to 3 Phase |
| 8  | Dy SP Office, Muvattupuzha  | 5             |                       |
| 9  | ACP Office, Thrikkakara     | 3             |                       |
| 10 | Mulavukadu Police Station   | 2             |                       |

Each and every site need to be provided the following:

- i. Provision for cleaning of PV modules - a Water tank of Minimum 200 litre capacity to be installed at appropriate height.
- ii. A Monoblock pump of appropriate capacity (Min 1 HP) as per the source of water.
- iii. All plumbing and civil works associated with the above;
- iv. Permanent ladder facility with hand-rails to access the roof of the building (in case there is no permanent facility available as of now).
- v. Additional structural work wherever required in addition to the site mentioned

in the above table. All additional structural work done must be provided with pathway and hand-rail facility for access to PV modules for cleaning.

## 2. SCHEDULE OF SUPPLY

- i. The items should be delivered and installed at the Roof top of buildings as mentioned above under the Kerala Police in Ernakulam District as specified by ANERT, under prior intimation and supervision of ANERT.
- ii. The Supply, Installation and Commissioning of the entire system shall be completed within **3 months of the date of supply order**. This is the time period for handing over the system to ANERT with Grid connectivity and no time extension in this regard without valid reasons will be entertained.
- iii. Supply SPV module, should be from the approved component list published in ANERT Website. The detailed Bill of Material for each of the site must be provided in advance before the dispatch of materials to each site.
- iv. The additional works/requirements at each individual site as mentioned in the Tender and the corrigendum issued thereafter need to be completed.
- v. Penalty for delay in supply and installation will be imposed at 0.5 % per week up to a maximum 10 %. In case of delay in supply and installation, Director, ANERT may cancel the contract and take recourse to other action as deemed appropriate.

## 3. INSTALLATION

- i. The installation work of the Solar power plant must be in compliance with the Technical Requirements and Standards as mentioned in the Tender
- ii. A display board (size 30cm x 20cm) should be displayed with contents attached in annexure - II is to be placed at all the 10 sites.

## 4. PAYMENT

- A. No advance payment will be given. Payment will be released on receipt of invoices and successful installation and commissioning of power plant along certified by the District Office of ANERT.
- B. The terms of payment shall be:
- i. 2.5 % of the invoice amount shall be charged by ANERT as non-refundable license fee and the remaining amount shall be treated as contract value for further payment.
  - ii. Upon delivery of items at all sites, 30 % of the contract value will be released as first part payment, if requested. The supplier shall submit the invoice for the materials supplied duly certified by the concerned District Office along with a report regarding the supply of materials.

- iii. On completion of the installation of the power plant and filing application for connectivity, 60% of the contract value (another 30% of the contract value, if first part payment is made) shall be released as first (second) part payment. All documents related to the completion of the work (including application filed at Distribution licensee) certified by the District office shall be submitted for the release of the amount.
  - iv. On commissioning of the grid connected system, 30% of the remaining contract value will be released. All documents related to the completion of the work including commissioning report shall be submitted for the release of the amount.
  - v. The remaining 10% shall be retained as performance security and will be released as given below.
    - a. 50% of performance security shall be paid after one year on request along with the preventive maintenance reports.
    - b. The remaining 50% shall be paid after the five-year warranty period on request along with the preventive maintenance reports for the 5 years.
  - vi. The payment for the delay of works in any one site will not affect the release of payment of other sites.
  - vii. This Performance security shall be released on submission of Bank Guarantee of equivalent amount valid for a period of 5 years. This will be returned only after completion of warranty period.
  - viii. The security deposit of 5% furnished along with the contract agreement shall be released on successful completion of supply, installation and commissioning.
- C. Income tax, contribution to workers' welfare fund and other statutory deductions shall be made from the payment as per prevailing norms.

## 5. WARRANTY

- i. 5 years' warranty should be provided by the supplier for the system and components or part of the system has to be provided
- ii. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90 % at the end of 10 years and 80% at the end of 25 years
- iii. The Warranty Card to be supplied must contain all the details of the system supplied. The OEM warranty card also need to be submitted along with the same.

## 6. OPERATION MANUAL

- i. An Operation, Instruction and Maintenance Manual, in English and Malayalam should be provided with the system.
- ii. The following minimum details must be provided in the manual:

- a. About solar power plant – its components and expected performance.
- b. About PV module
- c. About electronics
- d. About charging and significance of indicators
- e. DO's and DON'T's
- f. Clear instructions on regular maintenance and troubleshooting of solar power plant
- g. Name and address of the contract person in case of non-functionality of the solar power plant.

#### 7. SERVICE AND MAINTENANCE

- i. The faulty system or components should be replaced/ repaired within 10 days of fault reporting. The servicing should be carried out at the site of installation. The service personnel should visit the installations at least once in 4 months for preventive maintenance even if no faults are reported. **Agency should keep report of these preventive maintenance visit signed by beneficiary and submit before the concerned ANERT District Office on annual basis.**
- ii. Any Delay in servicing beyond 10 days of fault reporting would attract penalty at the rate of at the rate fixed by Director, ANERT and further actions will be initiated against the agency.
- iii. A designated contact Telephone Number and address should be submitted for reporting faults during the warranty period.

#### 8. INSURANCE

- i. The power plant must be insured at every stage of operation – from Material dispatch, storage, completion of installation and till 5 years after commissioning. The insurance coverage on handing over of the system must include all conditions of **Standard Fire and Special Perils Policy (Material Damage)**. The insurance premium for the 5 years of warranty is to be paid by the bidder. On handing over of the system, the original insurance policy is to be handed over to the authorised person at the site of installation and a copy to ANERT District Office. The annual premium payment receipt must be handed to the authorised person at the site of installation and a copy to the concerned District Office of ANERT.

Yours faithfully