

# Solar Energy System Solution

Evaluation of the Effectiveness of the Use of Softwares in the Design of Power Complexes Based on Renewable Energy Resources

## Our Address

Location : 259/361 PUKSA VILLE88  
MOO 5, SALAYA, PHUTTHAMONTHON,  
NAKHON PATHOM 73170

Call Us : +(66) 994569516

Mail Us: [info@d-techcon.com](mailto:info@d-techcon.com)

**DTC**  
**D-TECHCON**



## WelCom To Our Smart EPC Team

Our company emphasizes on timely, responsible and quality of work. In order to provide our customers with the safety of using the solar cell system and getting the best productivity in any environment.

Our company designs all systems based on engineering principles and our installation will be controlled by 10 years experienced Engineer in Solar Energy area .

Our Staffs all experienced in Solar system construction for morethan 5 years and all have pass work on high training and also safety training for each factory that we get for work.

Our team has experienced in many kinds of project such as Solar Rooftop, Solar Farm, Floating Solar and Off-grid/Hybrid Solar system with storage batteries.

Our Staffs all experienced in many size of projects range from 3kWp residential till 5MWp solar farm and we were trust by many major companies in the market to be a part in many projects. Such as WHA, Super and etc.



# The Company

**2004-2006** We started a small business. Start with sewing curtains and cloth bags to various hospitals with few employees.

**2007-2011** Started business launch Construction and additions, including the manufacture of wrought iron windows and doors which is the main contractor for SECON company including general people who order products to decorate the house.

**2012-2022** Established and the registered company with a new perspective on renewable energy and has gathered people who have knowledge and abilities in the field of solar cells to participate in the development of the organization Starting from the installation of solar cells in various projects.



## Our Mission

Our company emphasizes timely, responsible, and work quality. To provide our customers with the safety of using the solar cell system and getting the best productivity in any environment.

Constuction team ability : 1 MW in only 1 month

Operation respond : in 24 hrs. after get warning

O&M team ability: 1 MW in 4 days

## Our Vision

Our company will run business with ethical practices. We treat our customers as friends and partners, and everything that we doing choosing for our customers to be the best, trustworthy, and frankly. We give good care in choosing the product and also engineering standards. we take care of customer safety and also benefit customers on the solar cell system. We manage the installation in a good practice manner, so our project is done by schedule.

## What We Offer

In our work experience of working in solar EPC, BOS, and labor parts. we found that the best way to solve all problems is professionally and frankly mind among partners so we will provide these key values to our partners and customers.

### 01. Highest Satisfaction

- What you think is what you get.
- Desing by ERC, PEA, MEA and IEEE.
- Quick installation.
- Customers can get estimated result before desition making.
- We use only high qarlity products.

### 03. Best Productivity

- Best Project management.
- Professional Design with 10Y exp.
- PVsyst with 3D shading simulation.
- 3D BIM estimate for accurate BOM.
- 6 Y exp. in solar rooftop installation.

### 02. Good Care of Customer

- Day to day monitoring.
- Quick Respond in 48 hr.
- Customer can call to get consult.
- Provided manual and training.
- Not running away from work.

### 04. Win Win situation

- Get deep information before work.
- Design by cutomer need.
- Optimized need and price.
- No request more budget.
- Not provided beyond BOQ.
- Not provided beyond scope of work.





# Our Recent Project

These are recently outstanding sample project of our team.



Being Subcontractor in installation labor for 999kWp at Thai Malaya Class Co., Ltd. Saraburi



Being Subcontractor in installation labor for 300kWp at HomePro Chiang Mai .



Being Subcontractor in installation labor for 999kW at Big C super Center Ayutthaya.



Being Subcontractor in DC wiring job of Solar Farm 10MW Projects at Kanjana Buri.



Being Subcontractor in PV arrangement and DC wiring job of Solar Farm DC farm 3.4MW at SAIC Moter (MG) at Rayong.



Being Subcontractor in PV arrangement and DC wiring job of Solar Floating 1.4MW at AMATA City Rayong.





# 10 MWp Solar Farm

## Contract type

Labor  
DC part

## Owner

Bangchak Corporation

## Main contractor

Process Engineering Service





# 5 MWp Solar Farm

**Contract type**  
Job Labor

## **Owner**

Office of Security Service  
The War Veterans Organization  
Of Thailand

**Main contractor**  
Superblock Public  
Company Limited





# 3.4 MWp Solar Car Park

**Contract type**  
Labor for DC  
Wiring

**Owner**  
MG (SAIC Moter)

**Main contractor**  
Talesun Green Power Tech





# 1.4 MWp Floating Solar

**Contract type**  
Labor For DC  
Wiring

**Owner**  
AMATA City (Rayong)

**Main contractor**  
Talesun Green Poewr Tech







**999 kWp Solar Roof top**

**Contract type**  
Job Labor

**Owner**

Thai Malaya Glass  
Company Limited

**Main contractor**

Berli Jucker Public  
Company Limited





**999.9 kWp Solar Rooftop**

**Contract type**  
Labor

**Owner**  
Big C Ayutthaya

**Main contractor**  
ItalThai Engineering Co., Ltd.





**300 kWp Solar Roof top**

**Contract type**  
BOS

**Owner**  
HomePro (Chiang Mai)

**Main contractor**  
KG Solar





**300 kWp Solar Roof top**

**Contract type**  
Job Labor

**Owner**

Summer La Salle  
Lasan 22

**Main contractor**

Banpu Public  
Company Limited





**200 kWp Solar Roof top**

**Contract type**  
BOS

**Owner**  
HomePro (Chiang Mai)

**Main contractor**  
KG Solar





**100 Wp Solar Roof top**

**Contract type**  
BOS

**Owner**  
Sa Luang Pittayakhom  
School

**Main contractor**  
Talesun Greenpower Tech





**100 kWp Solar Roof top**

**Contract type**  
BOS Project

**Owner**

ANUBAN KHEHABANGPLEE  
SCHOOL

**Main contractor**  
Tripple Eight





**84 Wp Solar Roof top**

**Contract type**  
BOS

**Owner**  
WHA Facility

**Main contractor**  
Talesun Greenpower Tech





**70kWp Solar Rooftop**

**Contract type**  
EPC

**Owner**

TP HALO TEACHNO  
-ENERGY COMPANY LIMITED

**Main contractor**  
D-TECH CON CO., LTD.





**43 kWp Solar Roof top**

**Contract type**  
Job Labor

**Owner** Summer  
C.S. Group

**Main contractor**  
Spark Group





**30 kWp Solar Roof top**

**Contract type**  
Job Labor

**Owner**  
C.J. Express Group Co., Ltd.

**Main contractor**  
Gunkul Engineering Public  
Company Limited





# 30 kWp Solar Roof top Off-Grid

**Contract type**  
Labor

## **Owner**

Bangkok Border Patrol  
Police School Chef Charity

**Main contractor**  
PEA ENCOM





**10 kWp Solar Roof top**

**Contract type**  
EPC

**Owner**  
Charolotte House

**Main contractor**  
DTC







**5-10 kWp Solar Rooftop**

**Contract type  
BOS**

**Owner  
Residential &  
Small business users**

**Main contractor  
Spark Group**



# O&M

## O&M working scope

### - Mini Scope

- Cleaning (PV & Inverter & AC/DC cabinet)
- PV module Physical crack inspection.
- Screw tightening for mounting.
- Cable tightening under PV Module.

### - Medium Scope

- Cleaning (PV & Inverter AC/DC cabinet)
- PV module Physical crack inspection.
- Hot spot checking.
- I / V checking for each string.
- Termoscan on all cable connectors.
- Screw tightening for mounting and Cable terminal.
- Cable tightening under PV Module.

### - Full Scope

- Cleaning (PV & Inverter AC/DC cabinet).
- PV module Physical crack inspection.
- Hot spot checking.
- Micro crack scan (check by eye).
- I / V Curve checking for each string.
- Termoscan on PV module and all cable connectors.
- Screw tightening for mounting and Cable terminal.
- Cable tightening under PV Module.
- System error checking.
- System performance report.





**PVsyst V7.2.11**  
**VC1, Simulation date:**  
**05/06/22 07:05**  
**with v7.2.11**

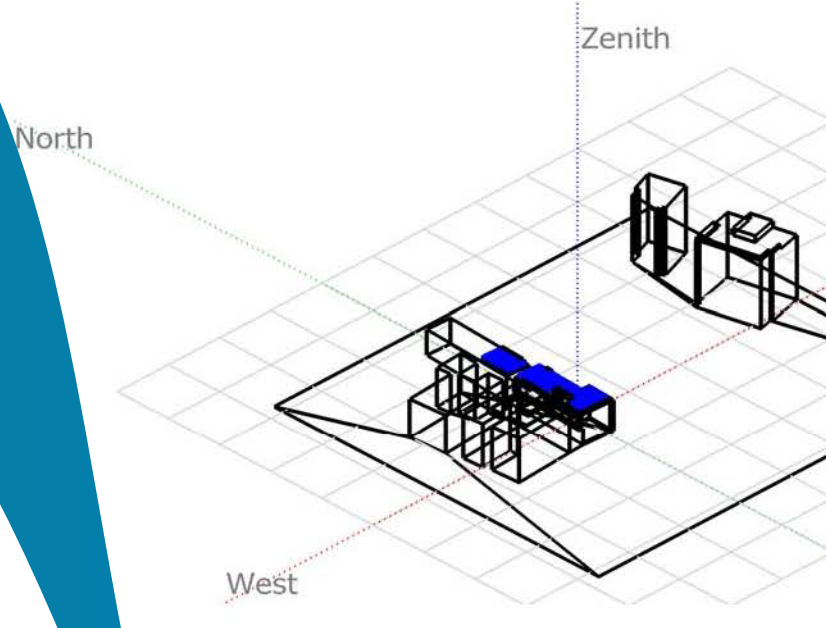
Variant: New simulation varia

# DESIGN

## Designing Processes

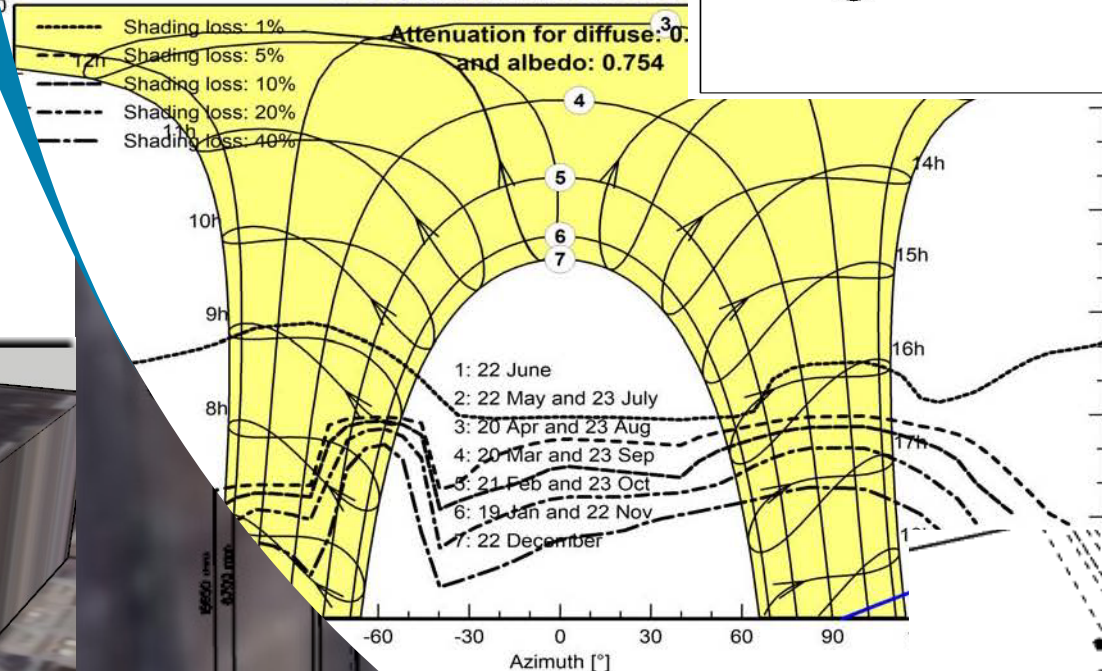
- Site survey
  - To get real consumption.
  - To get understanding of site environment.
  - To understanding customer specific need.
- Model Design
  - 3D Modeling from building plan or picture.
  - To Measure range and sizing in BOQ estimation.
  - To use 3D model in design PV layout and avoid shadow
  - To use 3D model for shading simulation of PVsyst.
  - To use 3D model in doing technical drawing.
- BOQ
  - Use 3D design to get quantity of any equipment.

## Near shadings parameter Perspective of the PV-field and surrounding

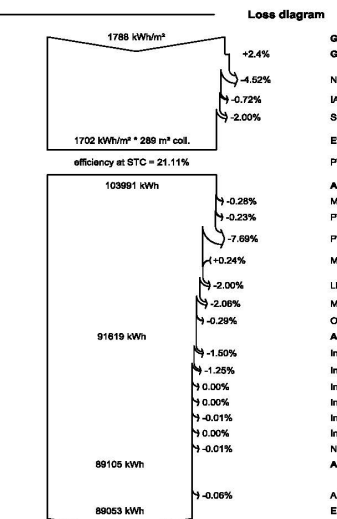


## Iso-shadings diagram Orientation #1

Fixed plane, Tilts/azimuths: 10°/:



## SOLAR SYSTEM SINGLE LINE DIAGRAM



TOU Charge 7 working days			Energy expectation									
Deviation 1.00%			Electricity Saving		Yearly O&M		SELF INVESTMENT SAVING					
Year	On Peak	Off Peak	kWh/Year	THB/Year	THB/Year	THB/Year	On peak Saving	Off peak Saving	Yearly Saving	Accumulated Saving	THB/Year	THB/Year
1st	4.21	2.63	89.053	256.77152	73.77797	330.54949			11.56862000	(1.56862000)		
2nd	4.25	2.66	88.609	256.04822	74.14423	332.19045			11.56862000	(1.56862000)		
3rd	4.29	2.68	88.127	255.29897	74.47832	348.94725			11.56862000	(1.56862000)		
4th	4.34	2.71	87.607	254.56972	74.77925	350.25553			11.56862000	(1.56862000)		
5th	4.38	2.74	87.050	253.85847	75.04884	351.48845			11.56862000	(1.56862000)		
6th	4.42	2.76	86.428	253.15422	75.28571	352.43025			11.56862000	(1.56862000)		
7th	4.47	2.79	85.748	252.45497	75.48725	353.12264			11.56862000	(1.56862000)		
8th	4.51	2.82	85.081	251.75972	75.65285	353.72790			11.56862000	(1.56862000)		
9th	4.56	2.85	84.332	251.06847	75.78102	354.25283			11.56862000	(1.56862000)		
10th	4.60	2.88	83.663	250.38222	75.88006	354.69801			11.56862000	(1.56862000)		
11th	4.65	2.90	83.032	249.70097	75.95077	355.07016			11.56862000	(1.56862000)		
12th	4.70	2.93	82.463	249.02472	76.00411	355.37471			11.56862000	(1.56862000)		
13th	4.74	2.96	81.917	248.35347	76.04110	355.61523			11.56862000	(1.56862000)		
14th	4.79	2.99	81.388	247.68722	76.06204	355.79677			11.56862000	(1.56862000)		
15th	4.84	3.02	80.873	247.02597	76.06891	355.91690			11.56862000	(1.56862000)		
16th	4.89	3.05	80.367	246.36972	76.06285	355.97329			11.56862000	(1.56862000)		
17th	4.94	3.08	79.870	245.71847	76.04382	355.96770			11.56862000	(1.56862000)		
18th	4.99	3.11	79.380	245.07222	76.01185	355.90184			11.56862000	(1.56862000)		
19th	5.04	3.15	78.894	244.43097	75.96685	355.77664			11.56862000	(1.56862000)		
20th	5.09	3.18	78.423	243.79472	75.90979	355.60185			11.56862000	(1.56862000)		
21st	5.14	3.21	77.941	243.16347	75.84181	355.37809			11.56862000	(1.56862000)		
22nd	5.19	3.24	77.460	242.53722	75.75385	355.10654			11.56862000	(1.56862000)		
23rd	5.24	3.27	76.981	241.91597	75.64788	354.78929			11.56862000	(1.56862000)		
24th	5.29	3.31	76.507	241.29972	75.52485	354.42854			11.56862000	(1.56862000)		
25th	5.35	3.34	76.038	240.68847	75.38579	353.92831			11.56862000	(1.56862000)		

