About Daly

- Founded in 2021
- San Francisco, CA + Chernivtsi, Ukraine
- API released May 2022
- Platform launch September 2022
- Independent engineer assessment underway
- 5 full time engineers
Daly is simplifying and improving solar + storage modeling

Utilize industry accepted and financible physical models

With advanced software functionality and capabilities

To provide the next generation in solar and storage modeling
Offering

**Web Interface**
Collaborative workspaces designed to simplify and automate modeling work

**API**
Access entire platform through REST API for custom functionality and workflow automation

**Third Party or Custom Software**
Use Daly in other software platforms or integrate it directly into your in-house software and tools
Daly Technical Overview

Daly **Solar** Modeling Platform
Solar yield calculated using the most financed and accepted models
- Industry standard models
- Utilizes .PAN and .OND file formats
- Octavia near shading model

Daly **Storage** Modeling Platform
Energy storage techno-economic modeling built for PV+S or standalone
- Cell-to-site level model
- Automated or manual dispatch algorithms
- Unique interaction with solar output
Near Shading Engine

Unlimited
2D Near Shading Engine

- Analogous to ‘unlimited’ sheds or trackers
- Simple inputs and usage
- Simulated at energy model run time
- Electrical impact optional
- No separate object management

Octavia
3D Near Shading Engine

- Complex 3D shading calculations
- Diode protected areas in 3D
- Terrain-aware tracking algorithm
- Import shading scenes from SHD files, JSON exports from PVComplete, .PVC files,
Terrain-Aware Tracking

- Octavia analyzes tables individually to determine backtracking angles
- Diffuse and direct irradiance adjustments made on hourly basis for every table
- Can reference module architecture to determine optimal backtracking angles
Transverse Diodes

- Divides table into diode sensitive areas
- Same input for 2D and 3D
- Informs Terrain-Aware tracking
- Used in electrical loss calculations
Octavia API Workflow

**Step 1**

api.dalyenergy.com/octavia/upload

**POST** Upload file with tracker inputs if tracker system

**Step 2**

api.dalyenergy.com/octavia/status

**GET** Check status of processing

**Step 3**

api.dalyenergy.com/epm/run

Reference ‘shadingSceneld’ in energy production model inputs
Example Project
Base Case Simulations

Unlimited
2D Near Shading Engine

2099 kWh/kWp
PVSYST: 2100 kWh/kWp

Octavia
3D Near Shading Engine

1911 kWh/kWp
PVSYST: 1904 kWh/kWp
Terrain Aware Tracking Improvement

Standard (Flat) Backtracking
Full-Cell Module

1911 kWh/kWp

Terrain-Aware Backtracking
Full-Cell Module

2054 kWh/kWp
+7.48% Gain
Impact of Half Cells

Standard (Flat) Backtracking
Full-Cell Module

1911 kWh/kWp

Terrain-Aware Backtracking
Full-Cell Module

2054 kWh/kWp
+7.48% Gain

Half-Cell Module

1972 kWh/kWp
+3.19% Gain

Terrain-Aware Backtracking
Half-Cell Module

2061 kWh/kWp
+7.84% Gain From Full-Cell
+4.5% Gain From Half-Cell
Are we missing anything?

Do Terrain-Aware tracking strategies change with Half-Cells?
Half-Cell Specific Terrain Aware Tracking

<table>
<thead>
<tr>
<th>Description</th>
<th>kWh/kWp</th>
<th>Gain/Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Terrain-Aware Tracking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard (Flat) Backtracking Half-Cell Module</td>
<td>1972</td>
<td></td>
</tr>
<tr>
<td>Terrain-Aware Backtracking Half-Cell Module</td>
<td>2061</td>
<td>+4.5% Gain</td>
</tr>
<tr>
<td>Half-Cell Specific Terrain-Aware</td>
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<tr>
<td>Standard (Flat) Backtracking Half-Cell Module</td>
<td>1972</td>
<td></td>
</tr>
<tr>
<td>Terrain-Aware Backtracking Half-Cell Module</td>
<td>1957</td>
<td>-0.7% Loss</td>
</tr>
</tbody>
</table>
Appendix
Positioning + Value Proposition

Fast
>90% Reduction in time to run

Automatable
Easily automate work and integrate yield modeling into any process

Reliable
 Produces results within +/- 0.05% of industry accepted models

Innovative
 Developing needed improvements to the modeling space
Daly Solar Platform

```json
{
  "String Length": 29,
  "Number of Strings": 322.0,
  "DC Wp": 3501750.0,
  "AC Wp": 2500000.0,
  "DCACRatio Actual": 1.4007,
  "Wh": 7322108455.74602,
  "Specific Yield": 2090.9854
}
```

**Daly API**
Production Modeling API

- Industry leading modeling engine
- Simple inputs and usage
- Block-to-plant level energy model
- Third party review underway

**Octavia**
3D Near Shading API

- Cloud based near shading model
- Terrain based tracking
- Third party reviewed
- 4 modes of electrical loss calculation

**Daly Interface**
Production Modeling Web Interface

- User friendly and collaborative
- Unlimited users and projects
- PDF report generation
- Custom branding & functionality
Daly Interface

- Web based interface
- Workspaces with user roles
- Create and manage production runs as well as modules, inverters, and locations databases
- PDF report generation (Q3 22)
- Assumption and workflow automation