



Business API Manual

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What is Blue Sky's API?

Our API service provides an easy way to get data that we use to calculate the solar score or an address, which is a key component to [our website](#). Our API also allows you to get data that we use in our calculations, as well as even more data that isn't even displayed on our website!

What do I get if I use Blue Skies' API?

You get access to the following data:

- Solar Panel Data: Exact coordinates where to place solar panels on a roof. This includes the orientation the solar panels should be as well.
- Solar score: The solar score of a location. The solar score gives a percentage of how good the location is for solar panel installation. The higher the percentage, the better the address.
- Solar array: A list of solar irradiances for the specified coordinates throughout the years.
- Satellite image: A Base64 string encoding of a satellite image of the given coordinates
- Elevation: The elevation data of how high above sea level the given coordinates are.
- Address: The address of passed in coordinates.
- Sunlight hours: The amount of usable sunlight hours specific coordinates has. For example, if a house is behind a mountain, it will have less usable sunlight hours.

How can I sign up to get access to this API?

You can simply sign up or find out more by contacting us at debuggersanonymous2023@gmail.com!

Once your application has been approved, you will be granted an API key and can then immediately start using our API!

How can I use this API?

Once you have an API key, you can use our API just by doing the following API calls.

Solar Panel Data

You will have to create a POST request with a JSON body structured as follows:

```
{
  "key": "Your API key",
  "total_panels": 10,
  "latitude": -25.12345,
  "longitude": 30.987654321
}
```

Send this with the URL: <https://dot-net-api.azurewebsites.net/BusinessBestSolarPanels/post>

You will receive data in the format:

```
[
  {
    "orientation": "LANDSCAPE",
    "yearlyEnergyDcKwh": 468.6997,
    "latitude": -33.92142105102539,
    "longitude": 18.414888381958008
  },
  {
    "orientation": "PORTRAIT",
    "yearlyEnergyDcKwh": 468.20374,
    "latitude": -33.9215087890625,
    "longitude": 18.414823532104492
  }
]
```

Other Data:

To make it easier to use, the rest of our data uses the same URL, with different values put in the 'data' parameter in the body, to indicate the type of data requested. The URL used for this will be: <https://dot-net-api.azurewebsites.net/BusinessRequestData/post>

Solar Score:

You will have to create a POST request with a JSON body structured as follows:

```
{
  "key": "Your API key",
  "data": "solar score",
  "latitude": -25.12345,
  "longitude": 30.987654321
}
```

You will receive data in the format:

```
{
  "solar_score": 90
}
```

Solar Array:

You will have to create a POST request with a JSON body structured as follows:

```
{
  "key": "Your API key",
  "data": "solar array",
  "latitude": -25.12345,
  "longitude": 30.987654321
}
```

You will receive data in the format:

```
[
  {
    "Date": "2016-01-22T00:00:00",
    "Radiation": 194.3958242671199
  },
  {
    "Date": "2016-02-22T00:00:00",
    "Radiation": 155.99409763433695
  }
]
```

Satellite Image:

You will have to create a POST request with a JSON body structured as follows:

```
{
  "key": "Your API key",
  "data": "satellite image",
  "latitude": -25.12345,
  "longitude": 30.987654321
}
```

You will receive data in the format:

```
{
  "base64_image": "iVBORw0KGgoAAAANSUhEUgAAAY8AAAGQCAYAAABWGuypAAAACXBIWXMAAABAAAAA..."
}
```

Address:

You will have to create a POST request with a JSON body structured as follows:

```
{
  "key": "Your API key",
  "data": "address",
  "latitude": -25.12345,
  "longitude": 30.987654321
}
```

You will receive data in the format:

```
{
  "address": "Bo-Kaap Museum, 71 Wale St, Cape Town, Western Cape 8001, South Africa"
}
```

Sunlight hours:

You will have to create a POST request with a JSON body structured as follows:

```
{
  "key": "Your API key",
  "data": "sunlight hours",
  "latitude": -25.12345,
  "longitude": 30.987654321
}
```

You will receive data in the format:

```
{
  "sunlight_hours": 5.135558128356934
}
```