# Professional Solar Panel Installation Services Website

WEDE5020-Project-Part 1 and 2

Sampaul Chauke ST10486658

ST10486658@vcconnect.edu.za

***Student Information***

Name: Sampaul Chauke

Student Number: ST10486658

Course: Web Development

Institution: The Independent Institute of Education (Pty) Ltd

Year: 2025

Table of Contents

[Professional Solar Panel Installation Services Website 0](file:///C:\Users\braSp\Desktop\WEDE5020-Part-2\WEDE5020-Project\README.docx#_Toc209456938)

[0](#_Toc209456939)

[*Maeddy’s Electrical - Solar Installation Website* 3](#_Toc209456940)

[*Project Overview (Complete)* 3](#_Toc209456941)

[*Website Goals and Objectives* 3](#_Toc209456942)

[Primary Goals: 3](#_Toc209456943)

[Key Performance Indicators (KPIs): 3](#_Toc209456944)

[*Key Features and Functionality* 3](#_Toc209456945)

[Core Features: 3](#_Toc209456946)

[Specialised Functionality: 4](#_Toc209456947)

[*Design and User Experience* 4](#_Toc209456948)

[Design Aesthetic and Branding: 4](#_Toc209456949)

[User Experience Considerations: 4](#_Toc209456950)

[*Technical Requirements* 4](#_Toc209456951)

[Programming Languages and Frameworks: 4](#_Toc209456952)

[Hosting and Domain Requirements: 4](#_Toc209456953)

[*Timeline and Milestones* 5](#_Toc209456954)

[Phase 1: Foundation (Completed) 5](#_Toc209456955)

[Phase 2: Development (Completed) 5](#_Toc209456956)

[Phase 3: Deployment (Completed) 5](#_Toc209456957)

[*Part 1 Details* 5](#_Toc209456958)

[*Part 2 Details* 6](#_Toc209456959)

[*CSS Implementation:* 6](#_Toc209456960)

[*Desktop-Focused Features:* 6](#_Toc209456961)

[*Code Organisation:* 6](#_Toc209456962)

[*Sitemap* 7](#_Toc209456963)

[*Changelog* 7](#_Toc209456964)

[Version 2.0.0 – Part2 Desktop Styling(Current) 7](#_Toc209456965)

[Added: 7](#_Toc209456966)

[Modified: 8](#_Toc209456967)

[Technical Improvements: 8](#_Toc209456968)

[Development Progress: 8](#_Toc209456969)

[*Reference List* 9](#_Toc209456970)

[Reference list 9](#_Toc209456971)

[Images and Visual Content: 9](#_Toc209456972)

[Technical Resources: 9](#_Toc209456973)

[Industry Research: 9](#_Toc209456974)

[Repository Link: 10](#_Toc209456975)

# *Maeddy’s Electrical - Solar Installation Website*

## *Project Overview (Complete)*

This project is a comprehensive website for Maeddy’s Electrical, a professional solar panel installation company based in Limpopo, South Africa. The website serves as a digital platform to showcase the company's solar energy solutions, attract potential customers, and provide detailed information about their services for residential, commercial, and specialised installations.

The website exemplifies modern web development practices, featuring responsive design, user-friendly navigation, and a professional presentation of services. It targets homeowners, business owners, and commercial property managers seeking sustainable energy solutions.

## *Website Goals and Objectives*

### Primary Goals:

* Generate leads for solar installation services
* Establish credibility and trust in the solar installation market
* Provide comprehensive information about solar solutions
* Showcase completed projects and customer testimonials
* Facilitate easy contact and quote requests

### Key Performance Indicators (KPIs):

* Increase in quote form submissions
* Reduced bounce rate through engaging content
* Improved search engine visibility
* Enhanced user engagement time
* Mobile traffic conversion rates

## *Key Features and Functionality*

### Core Features:

* **Multi-page Navigation**: Seamless navigation between Home, About, Services, Enquiry, and Contact pages
* **Service Showcase**: Detailed presentation of residential, commercial, and specialised solar solutions
* **Project Gallery**: Visual portfolio of completed installations
* **Quote Request System**: Interactive form for potential customers to request quotes
* **Contact Integration**: Multiple contact methods, including WhatsApp, phone, and email
* **Social Media Integration**: Links to Facebook and Instagram profiles
* **Professional Branding**: Consistent visual identity throughout the site

### Specialised Functionality:

* **Installation Process Timeline**: Step-by-step guide for customers
* **Service-specific Information**: Tailored content for homes, businesses, shops, and bakeries
* **Warranty Information**: Clear presentation of 25-year warranty coverage
* **Performance Metrics**: Company statistics and trust indicators

## *Design and User Experience*

### Design Aesthetic and Branding:

* **Colour Scheme**: Professional blue and white palette representing trust and clean energy
* **Typography**: Clear, readable fonts optimised for web viewing
* **Layout**: Clean, modern grid-based design with intuitive information hierarchy
* **Visual Elements**: Solar-themed icons and professional photography

### User Experience Considerations:

* **Navigation**: Intuitive menu structure with clear page hierarchy
* **Accessibility**: Semantic HTML structure for screen readers
* **Mobile Responsiveness**: Optimised viewing across all device sizes
* **Loading Performance**: Optimised images and efficient code structure
* **Call-to-Action Placement**: Strategic positioning of quote and contact buttons

## *Technical Requirements*

### Programming Languages and Frameworks:

* **HTML5**: Semantic markup for content structure
* **CSS3**: Advanced styling including responsive design
* **JavaScript**: Interactive functionality and form handling
* **Font Awesome**: Professional icon library integration

### Hosting and Domain Requirements:

* Web hosting service with HTML/CSS/JavaScript support
* Domain name registration (maeddyselectrical.co.za recommended)
* SSL certificate for secure browsing
* Contact form processing capability

## *Timeline and Milestones*

### Phase 1: Foundation (Completed)

* ✅ Project planning and research
* ✅ Content gathering and organisation
* ✅ File structure creation
* ✅ Basic HTML structure implementation

### Phase 2: Development (Completed)

* ✅ CSS styling and responsive design
* ✅ JavaScript functionality
* ✅ Cross-browser testing
* ✅ Performance optimisation

### Phase 3: Deployment (Completed)

* ✅ Final testing and debugging
* ✅ Content review and optimisation
* ✅ Repository setup and documentation
* ✅ Project submission preparation

# *Part 1 Details*

This represents the foundational phase of the website development project. The current submission includes:

* Complete HTML structure for all five main pages
* Responsive CSS styling
* JavaScript functionality
* Professional content integration
* Social media and contact integration
* Project gallery implementation
* Quote request system

# *Part 2 Details*

Part 2 focused on implementing professional desktop styling and enhanced user experience:

## *CSS Implementation:*

* **External Stylesheet**: Created comprehensive Styles.css with organised sections
* **CSS Reset**: Implemented universal reset for consistent cross-browser rendering
* **Typography System**: Established font hierarchy using Segoe UI font family
* **Colour Palette**: Professional blue (#1e3a8a, #2c5aa0) and yellow (#fbbf24, #f59e0b) scheme
* **Layout Systems**: Advanced CSS Grid and Flexbox implementations

## *Desktop-Focused Features:*

* **Navigation**: Sticky header with smooth hover transitions
* **Hero Section**: Compelling landing area with gradient backgrounds
* **Service Cards**: Professional grid layout with detailed information
* **Gallery System**: Grid-based project showcase with lightbox functionality
* **Contact Forms**: Styled form elements with consistent visual design
* **Interactive Elements**: Hover effects, button animations, and visual feedback

## *Code Organisation:*

* **Comprehensive Comments**: Added detailed documentation to all HTML and CSS files
* **Naming Convention**: Consistent kebab-case class naming throughout
* **File Structure**: Organised CSS with clear section dividers and logical flow
* **Maintainable Code**: Well-structured, commented code for easy future updates

# *Sitemap*

***Maeddy’s Electrical Website***

# *Changelog*

## Version 2.0.0 – Part2 Desktop Styling(Current)

* Created complete website structure
* Implemented responsive design
* Added contact form functionality
* Integrated social media links
* Developed project gallery
* Optimised for mobile devices

### Added:

* External CSS stylesheet (Styles.css) with comprehensive desktop styling
* Professional typography system using Segoe UI font family
* Advanced CSS Grid and Flexbox layout systems
* Interactive hover effects and smooth transitions
* Comprehensive code comments and documentation
* Professional colour scheme implementation
* Lightbox functionality for project gallery
* Back-to-top button for improved navigation (Still on testing)
* Sticky header with smooth animations

### Modified:

* Updated all HTML files to link to the external stylesheet
* Enhanced navigation with active state indicators
* Improved form styling and user experience
* Restructured content layout for better visual hierarchy
* Updated README.md with Part 2 documentation

### Technical Improvements:

* CSS reset for consistent cross-browser rendering
* Optimised file organisation and naming conventions
* Enhanced accessibility through semantic HTML structure
* Improved code maintainability through comprehensive commenting

## Development Progress:

* **HTML Structure**: Complete for all pages with semantic markup
* **CSS Styling**: External stylesheet with advanced desktop styling
* **JavaScript**: Form handling and interactive functionality
* **Content**: Professional copy and imagery integrated
* **Testing**: Cross-browser compatibility for desktop environments

# *Reference List*

# Reference list

Coyier, C. (2018). *A Complete Guide to Flexbox | CSS-Tricks*. [online] CSS-Tricks. Available at: <https://css-tricks.com/snippets/css/a-guide-to-flexbox/>.

Font Awesome 5 (2024). *Font Awesome 5*. [online] Fontawesome.com. Available at: <https://fontawesome.com/>.

Mozilla (2019). *MDN Web Docs*. [online] MDN Web Docs. Available at: <https://developer.mozilla.org/en-US/>.

W3Schools (2025). *W3Schools online web tutorials*. [online] W3schools.com. Available at: <https://www.w3schools.com/>.

www.halo-lab.com. (n.d.). *How to Design an Educational Website — Tips and Best Practices — Halo Lab*. [online] Available at: <https://www.halo-lab.com/blog/educational-website-design-tips-and-best-practices>.

## Images and Visual Content:

* Company project photographs: Used with permission from Maeddy's Electrical
* Solar industry stock images: Licensed from public domain sources
* Icons: Font Awesome 6.5.0 (licensed for commercial use)

## Technical Resources:

* HTML5 Semantic Elements Guide - Mozilla Developer Network
* CSS Grid and Flexbox Layout Techniques - CSS-Tricks
* Typography Best Practices - Web.dev
* CSS Reset and Normalise Techniques - Meyer Web
* Professional Web Colour Palettes - Coolors.co

## Industry Research:

* South African Solar Industry Statistics - Solar Power Africa
* Renewable Energy Market Analysis - Department of Energy
* Local Business Web Design Trends - Local Business Marketing Guide
* Professional Web Design Principles - Smashing Magazine

Repository Link:

[ST10486658-Sampaul-Chauke/WEDE5020-Project](https://github.com/ST10486658-Sampaul-Chauke/WEDE5020-Project)