



| SinaSave - Manual

www.sinasave.siemens.com



1. **The SinaSave Tool**
2. Tool layout and structure
3. System comparison for pumps and fans
4. Motor Comparison
5. Projects / Saving / Loading
6. Sharing and exporting results

The SinaSave tool Overview

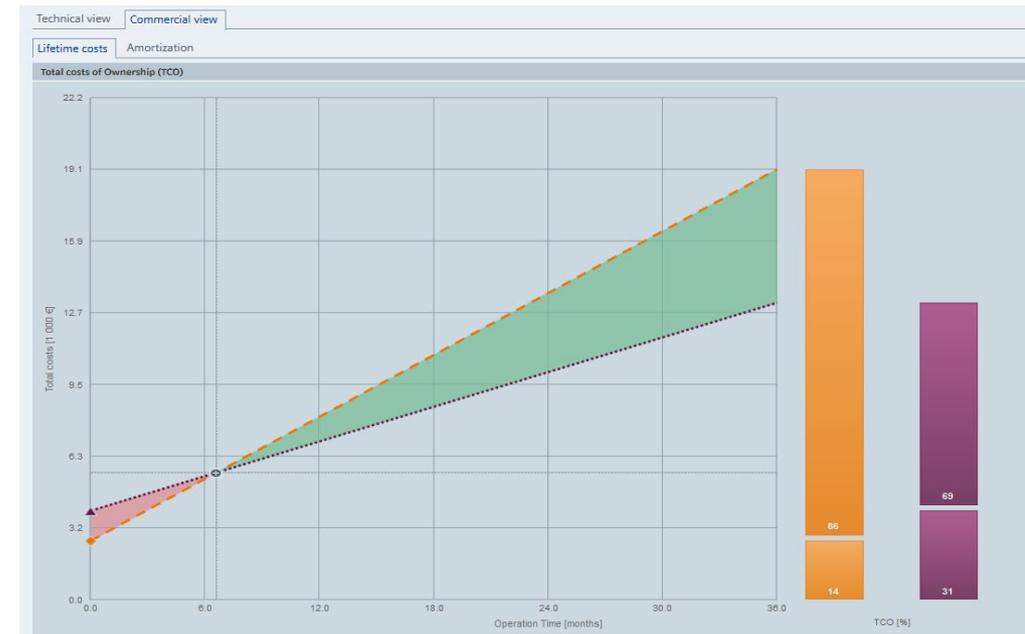


SinaSave

- outputs **energy and cost saving potential** - as well as **amortization times** - for energy-efficient pumps/fan **IDS drive systems** and **energy-efficient motors** under customer-specific application conditions

Customer benefits

- SinaSave provides **decision-making support** when it comes to investing in energy-efficient technologies



The SinaSave tool Overview

SinaSave supports...

- **Languages**

EN, DE, FR, IT, ES, PT, ZH, RU

- **Currencies**

EUR, GBP, CHF, USD, INR, CNY, ZAR, BRL, MXN

- **Supply systems**

Low voltage

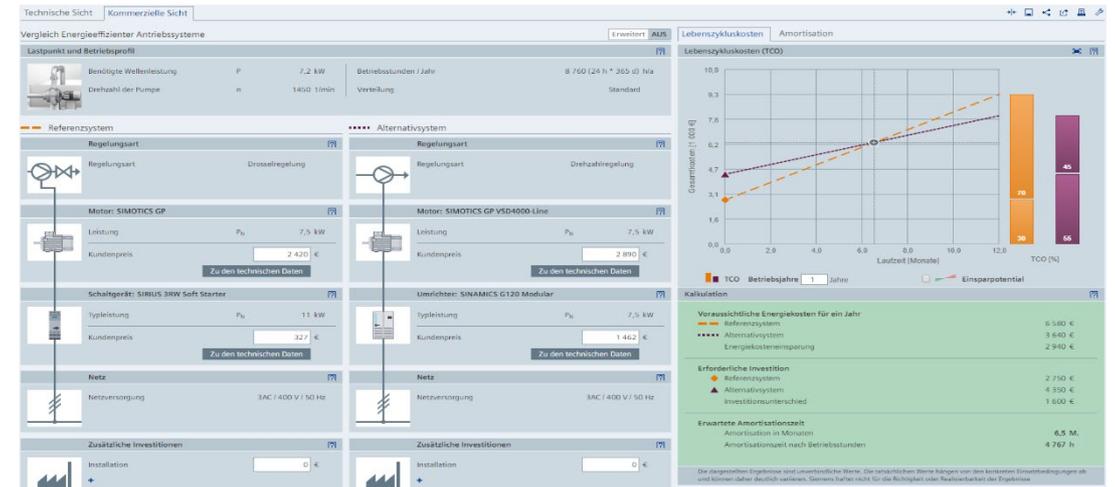
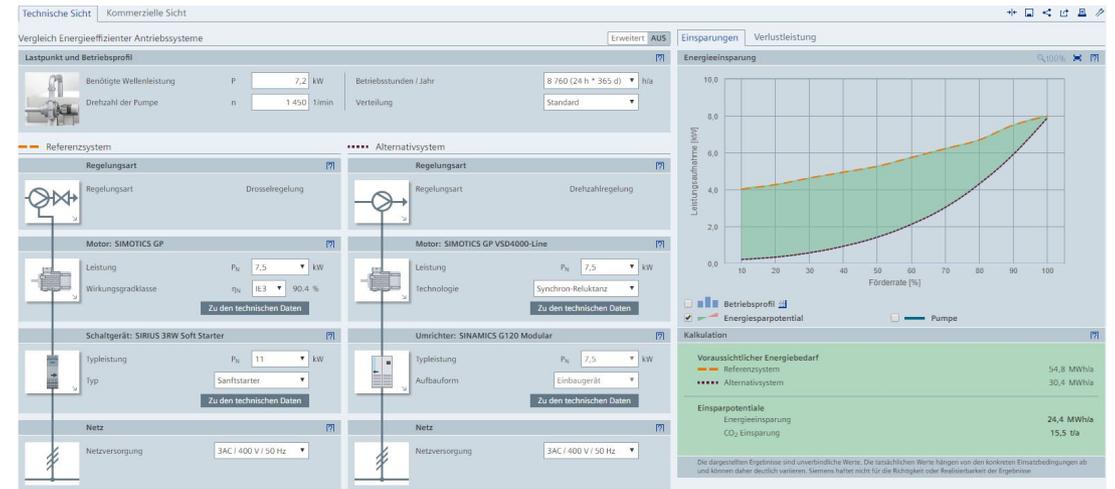
- 400 V / 500 V / 690 V (3 AC / 50 Hz)
- 480 V (3 AC / 60 Hz)

Medium voltage and high voltage

- 3.3 kV / 6 kV / 10 kV (3 AC / 50Hz)

- **A comprehensive Siemens portfolio**

- SINAMICS, SIMOTICS and SIRIUS
- IEC: 0.55 kW – 5.5 MW
- NEMA: 1 hp – 400 hp



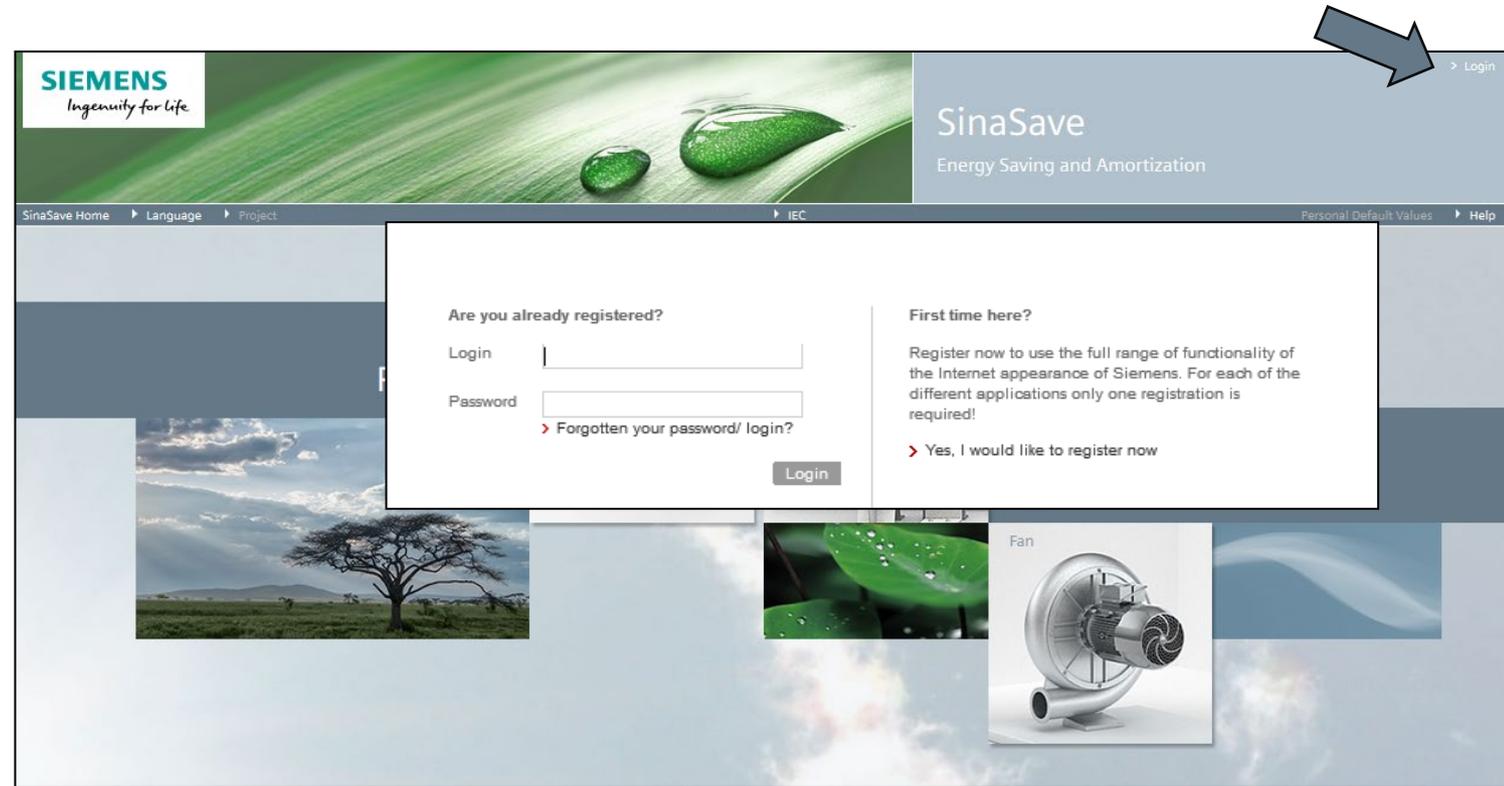
The SinaSave tool

Login function

Login in SinaSave is optional, however, will afford the following additional functionalities:

- Storage and loading of comparisons and projects
- Local storage
- Exporting and sharing of results
- Usage of individual profiles and personal presets

Utilization of SinaSave is generally free of charge



SIEMENS
Ingenuity for Life

SinaSave
Energy Saving and Amortization

SinaSave Home Language Project IEC Personal Default Values Help

Are you already registered?

Login

Password

> Forgotten your password/ login?

Login

First time here?

Register now to use the full range of functionality of the Internet appearance of Siemens. For each of the different applications only one registration is required!

> Yes, I would like to register now

Fan



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Tool layout and structure

Basic structure

Reference and alternative system

Input area

Output area

Energy savings

Calculation	
Expected energy demand	
Reference system	54.8 MWh/a
Alternative system	30.4 MWh/a
Saving potentials	
Energy savings	24.4 MWh/a
CO ₂ emission savings	15.5 t/a

Tool layout and structure

Basic structure – Technical view

The screenshot displays the Siemens SinaSave software interface. At the top, the Siemens logo and 'SinaSave Energy Saving and Amortization' are visible. The interface is divided into several sections:

- Technical data:** This section is on the left and contains two columns of configuration options for a 'Reference system' and an 'Alternative system'.
 - Reference system:** Control Mode (Throttle), Motor: SIMOTICS GP (Power: 7.5 kW, Efficiency class: IE3, 90.4%), Switchgear: SIRIUS 3RW Soft Starter (Rated power: 11 kW, Type: Soft Starter), Grid (Line supply: 3AC / 400 V / 50 Hz).
 - Alternative system:** Control Mode (Converter), Motor: SIMOTICS GP VSD4000-Line (Power: 7.5 kW, Technology: Synchronous-reluctance), Converter: SINAMICS G120 Modular (Rated power: 7.5 kW, Design type: Chassis), Grid (Line supply: 3AC / 400 V / 50 Hz).
- Energy savings, power loss:** This section is on the right and features a line graph showing 'Power demand [kW]' vs 'Flowrate [%]'. It includes a table of 'Expected energy demand' and 'Saving potentials'.

Category	Reference system	Alternative system
Expected energy demand	54.8 MWh/a	30.4 MWh/a
Saving potentials		
Energy savings		24.4 MWh/a
CO ₂ emission savings		15.5 t/a

Graphical results

Numerical results

Technical data

Energy savings, power loss

Tool layout and structure

Basic structure – Commercial view

Technical view | **Commercial view** | Extend

Compare energy efficient drive systems

Load point and operation profile

Required shaft power	P	7.2 kW	Operating hours / year	8 760 (24 h * 365 d) h/a
Pump speed	n	1450 1/min	Allocation	Default

Reference system | Alternative system

Component	Reference system	Alternative system
Control Mode	Throttle	Converter
Controller	Throttle	Converter
Motor: SIMOTICS GP	7.5 kW, 2 420 €	SIMOTICS GP VSD4000-Line, 2 890 €
Switchgear: SIRIUS 3RW Soft Starter	11 kW, 327 €	SINAMICS G120 Modular, 1 462 €
Grid	3AC / 400 V / 50 Hz	3AC / 400 V / 50 Hz
Additional Investment	0 €	0 €

Lifetime costs | Amortization

Total costs of Ownership (TCO)

Calculation

Category	Reference system	Alternative system	Energy costs savings
Expected energy costs	6 580 €	3 640 €	2 940 €
Required Investment	2 750 €	4 350 €	1 600 €
Expected amortization time	6.5 mo.		4 767 h

The displayed results are non-binding values. The actual results depend on the specific conditions of use and may vary considerably. Siemens assumes no warranty or liability whatsoever for the correctness or feasibility of the displayed results.

Commercial data

Lifetime costs, amortization

Graphical results

Numerical results



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System comparison for pumps and fans "Technical view"

- The load point of the application is defined here via the **pump speed** and **power**. Furthermore, **pre-defined operation profiles** can be selected

The screenshot displays the 'Technical view' of a software interface for comparing energy efficient drive systems. The interface is divided into two columns, each representing a different drive configuration. At the top, there are tabs for 'Technical view' and 'Commercial view', and a button for 'Extended OFF'. Below this, the 'Load point and operation profile' section is highlighted with a red box. It contains the following parameters:

- Required shaft power: P = 7.2 kW
- Pump speed: n = 1 450 1/min
- Operating hours / year: 8 760 (24 h * 365 d) h/a
- Allocation: Default

Below the load point section, there are two columns of drive components, each with a 'Control Mode' section and a 'Get technical data' button:

- Left Column:**
 - Control Mode: Throttle
 - Motor: SIMOTICS GP (Power: 7.5 kW, Efficiency class: IE3, 90.4%)
 - Switchgear: SIRIUS 3RW Soft Starter (Rated power: 11 kW, Type: Soft Starter)
 - Grid: 3AC / 400 V / 50 Hz
- Right Column:**
 - Control Mode: Converter
 - Motor: SIMOTICS GP VSD4000-Line (Power: 7.5 kW, Technology: Synchronous-reluctance)
 - Converter: SINAMICS G120 Modular (Rated power: 7.5 kW, Design type: Chassis)
 - Grid: 3AC / 400 V / 50 Hz

System comparison for pumps and fans

"Technical view"

- The **Extended mode** provides additional selection parameters. This permits a more detailed definition of the application and the components
- Entry of additional **application data** allows an **automatic calculation** of the [required shaft power](#)
- As an alternative to the **predefined [operation profiles](#)**, this may also be configured individually by entering ten individual values

The screenshot shows the 'Technical view' of the Siemens software interface for configuring a pump. The interface is divided into several sections:

- Navigation:** 'Technical view' and 'Commercial view' tabs are at the top. A blue arrow points to the 'ON' button for 'Extended' mode.
- Compare energy efficient drive systems:** A header bar with a search icon.
- Pump: Default:** A section with a pump icon and a 'Designation centrifugal pump' dropdown set to 'Custom'. It includes fields for 'Medium' (Water), 'Density' (1000 kg/m³), 'Pump head' (H = 10.0 m), 'Rated flow' (Q = 230 m³/h), 'Pump speed' (n = 1450 1/min), 'Pump stage' (1), and 'Efficiency at rated load' (87.0 %).
- Static head and Specific speed:** Fields for 'Static head' (H_{stat} = 0 m) and 'Specific speed' (n_q = 65.2 1/min).
- Required shaft power:** A calculated field showing 7.2 kW.
- Operation Profile:** A section with 'Operating hours / year' (8 760 (24 h * 365 d) h/a), 'Allocation' (Default), 'Operation-days / year' (365), and 'Operation-hours / day' (24.0).
- Flowrate and Operating hours:** A row of ten input fields for flowrate percentages (10% to 100%) and operating hours (0.0, 0.0, 1.0, 2.0, 3.0, 4.0, 5.0, 4.0, 2.0, 3.0) for each percentage.

System comparison for pumps and fans

"Technical view"

- Clicking on the switch symbols allows the [control mode](#) of the system...
- ...as well as the types of individual components (motor, converter, switchgear) to be selected
- Values of the components can then be adapted

SinaSave Home | Language | Project

Technical view | Commercial view

Compare energy efficient drive systems

Load point and operation profile

Required shaft power	P	7.2 kW	Operating hours / year
Pump speed	n	1 450 1/min	Allocation

Reference system

Control Mode: Throttle

Controller: Throttle

Motor: SIMOTICS GP

Power	P_N	7.5 kW
Efficiency class	η_N	IE3 90.4 %

Get technical data

Switchgear: SIRIUS 3RW Soft Starter

Rated power	P_N	11 kW
Type	Soft Starter	

Get technical data

Grid: 3AC / 400 V / 50 Hz

Alternative system

Control Mode: Converter

Motor: SIMOTICS GP VSD4000-Line

Convert

Rated po

Design t

Grid: 3AC / 400 V / 50 Hz

Line supply

Line supply

Throttle

Controlling by increasing the flow resistance. The pump is always operating with rated speed.

Bypass

Controlling by increasing the bypass flow. The pump is always operating with rated power

Converter

Controlling by reducing the speed of the pump. The pump is always operating on demand.

SIMOTICS - IEC Inverter Duty Motor

Optimized for converter operation
Synchronous-reluctance and asynchronous technology

SIMOTICS - IEC Standard Motor

Direct online motor - converter capable
Asynchronous technology

Existing Motor

Existing motor - converter capable
Asynchronous technology

System comparison for pumps and fans

"Technical view"

- Following individual entry of the values, a **graphic representation of the results** is displayed on the right-hand side
- The **numerical results** of the power consumption are displayed together with [the energy and CO2 emission savings](#) beneath the graphic

Technical view Commercial view

Compare energy efficient drive systems

Pump: Default

Designation centrifugal pump Default Medium Density

Pump head H 10.0 m Static head

Rated flow Q 230 m³/h Specific speed

Pump speed n 1 450 1/min Required shaft power

Pump stage 1

Efficiency at rated load 87.0 %

Operation Profile

Operating hours / year 8 760 (24 h * 365 d) h/a Allocation

Operation-days / year 365 Operation-hours / day

Flowrate 10% 20% 30% 40% 50% 60% 70% 80%

Operating hours 0.0 0.0 1.0 2.0 3.0 4.0 5.0 4.0

Reference system Alternative system

Control Mode Controller Throttle Controller



Calculation

Expected energy demand	
Reference system	54.8 MWh/a
Alternative system	30.4 MWh/a
Saving potentials	
Energy savings	24.4 MWh/a
CO ₂ emission savings	15.5 t/a

System comparison for pumps and fans

"Commercial view"

- By changing to the **commercial view**, it is possible to display and process the **economical data**, such as prices and discounts
- A reconfiguration of the components or systems is not possible here

The screenshot displays the 'Commercial view' of a system comparison tool. It features two columns: 'Reference system' and 'Alternative system'. The 'Reference system' includes a Throttle controller, a SIMOTICS GP motor (7.5 kW, 2420 €), a SIRIUS 3RW Soft Starter (11 kW, 327 €), and a 3AC / 400 V / 50 Hz grid supply. The 'Alternative system' includes a Converter controller, a SIMOTICS GP VSD4000-Line motor (7.5 kW, 2890 €), and a SINAMICS G120 Modular converter (7.5 kW, 1462 €). A 'Load point and operation profile' section shows required shaft power (7.2 kW) and pump speed (1450 1/min). An arrow points to the 'Commercial view' tab.

Component	Reference System	Alternative System
Control Mode	Throttle	Converter
Motor	SIMOTICS GP (7.5 kW, 2420 €)	SIMOTICS GP VSD4000-Line (7.5 kW, 2890 €)
Switchgear	SIRIUS 3RW Soft Starter (11 kW, 327 €)	SINAMICS G120 Modular (7.5 kW, 1462 €)
Grid	3AC / 400 V / 50 Hz	-

System comparison for pumps and fans "Commercial view"

- Analogous to the technical view, the commercial results of both systems, e.g. [energy costs savings](#) and [amortization time](#) are displayed on the right-hand side

Technical view Commercial view

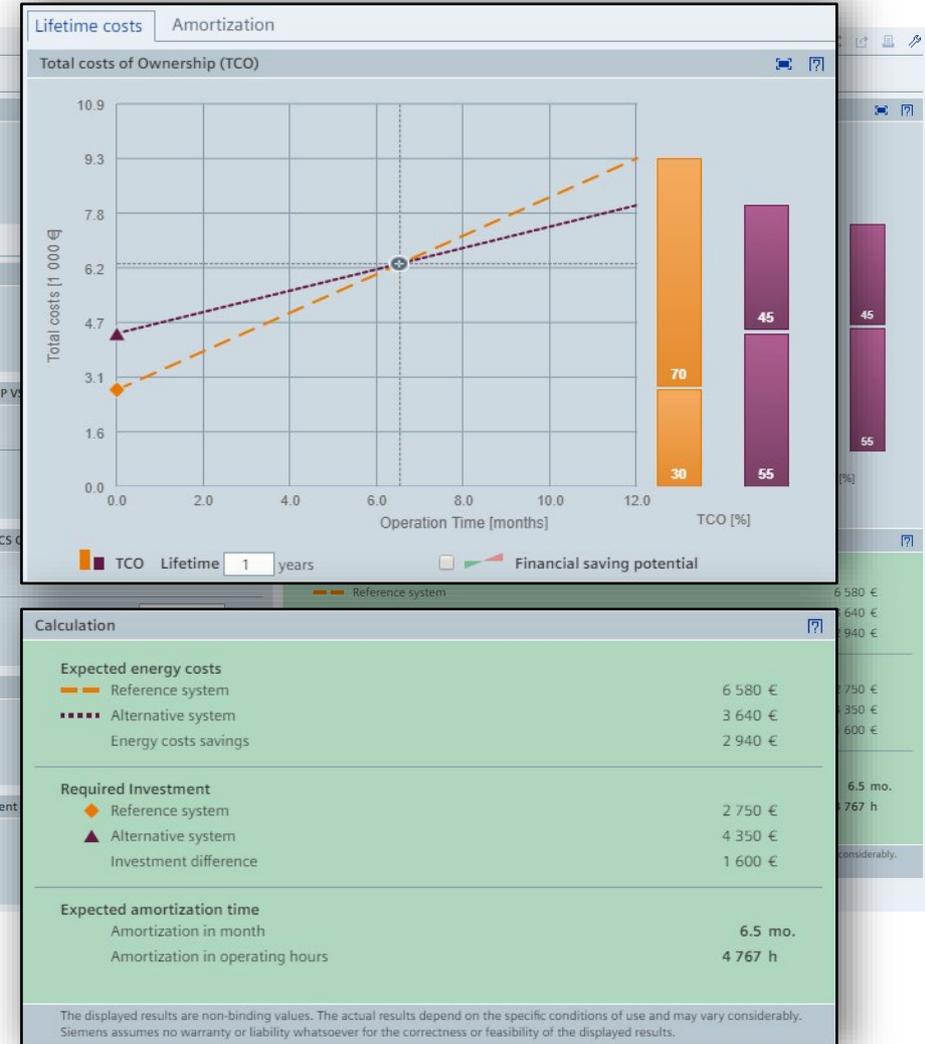
Compare energy efficient drive system

Load point and operation profile

Required shaft power	P _N	7.2 kW	Operating hours / year	
Pump speed	n	1450 1/min	Allocation	

--- Reference system Alternative system

Control Mode	Throttle	Control Mode	
Controller		Controller	
Motor: SIMOTICS GP		Motor: SIMOTICS GP V	
Power	P _N 7.5 kW	Power	
Customer Price	2 420 €	Customer Price	
Switchgear: SIRIUS 3RW Soft Starter		Converter: SINAMICS C	
Rated power	P _N 11 kW	Rated power	
Customer Price	327 €	Customer Price	
Grid		Grid	
Line supply	3AC / 400 V / 50 Hz	Line supply	
Additional Investment		Additional Investment	
Installation	0 €	Installation	





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Motor comparison "Technical view"

- Here you can adapt the [motor](#) and [operation profile](#)

Technical view | Commercial view

Compare energy efficient motors

Motor Profile

Power P_N 18.5 kW | Ignition protection class without

Pole number 4

Line supply 3AC / 400 V / 50 Hz

Operation Profile

Operation Profile Default

Operation-days / year 365 d/a | Motor load 2/4 3/4 4/4

Operation-hours / day 24.0 h/d | Power output 9.25 13.88 18.50 kW

Operation-hours / year 8760.0 h/a | Operating hours 6.0 6.0 12.0 h/d

Reference Motor: Default

Efficiency class EFF2 / IE1 | Efficiency (IE-Class) η 90.2 90.2 89.3 %

Casting | Efficiency (EFF-Class) η 90.0 89.0 90.0 %

Alternative Motor 1: SIMOTICS GP

Efficiency class IE3 | Efficiency η 93.2 93.2 92.6 %

Casting Aluminum

[Get technical data](#)

[+ New Motor](#)

Motor comparison "Technical view"

- By clicking on the **motor symbol**, you can choose between a **Siemens motor** and a **third-party motor**
- Up to **three alternative motors** can be added with the "New Motor" button, which will then be compared with the **reference motor**

The screenshot shows the 'Technical view' of a motor comparison tool. At the top, there are tabs for 'Technical view' and 'Commercial view'. Below this is the title 'Compare energy efficient motors'. The interface is divided into several sections:

- Motor Profile:** Includes fields for Power (P_N 18.5 kW), Pole number (4), Line supply (3AC / 400 V / 50 Hz), and Ignition protection class (without).
- Operation Profile:** Includes Operation Profile (Default), Operation-days / year (365 d/a), Operation-hours / day (24.0 h/d), and Operation-hours / year (8760.0 h/a). It also shows Motor load (2/4, 3/4, 4/4), Power output (9.25, 13.88, 18.50 kW), and Operating hours (6.0, 6.0, 12.0 h/d).
- Efficiency (IE-Class):** Shows efficiency values of 90.2, 90.2, and 89.3 %.
- Efficiency (EFF-Class):** Shows efficiency values of 90.0, 89.0, and 90.0 %.
- Alternative Motor 1: SIMOTICS GP:** Shows Efficiency class (IE3), Casting (Aluminum), and Efficiency (93.2, 93.2, 92.6 %).

A modal window is open in the center, showing a selection between a 'SIMOTICS' motor (represented by a motor icon) and an 'Existing Motor' (represented by a motor icon). A red box highlights the 'New Motor' button at the bottom left of the interface.

Motor comparison "Technical view"

- In this example, a third-party motor has been added as a second alternative motor
- By clicking on the header, an entry field appears in which the **default name** of the third-party motors can be **changed**

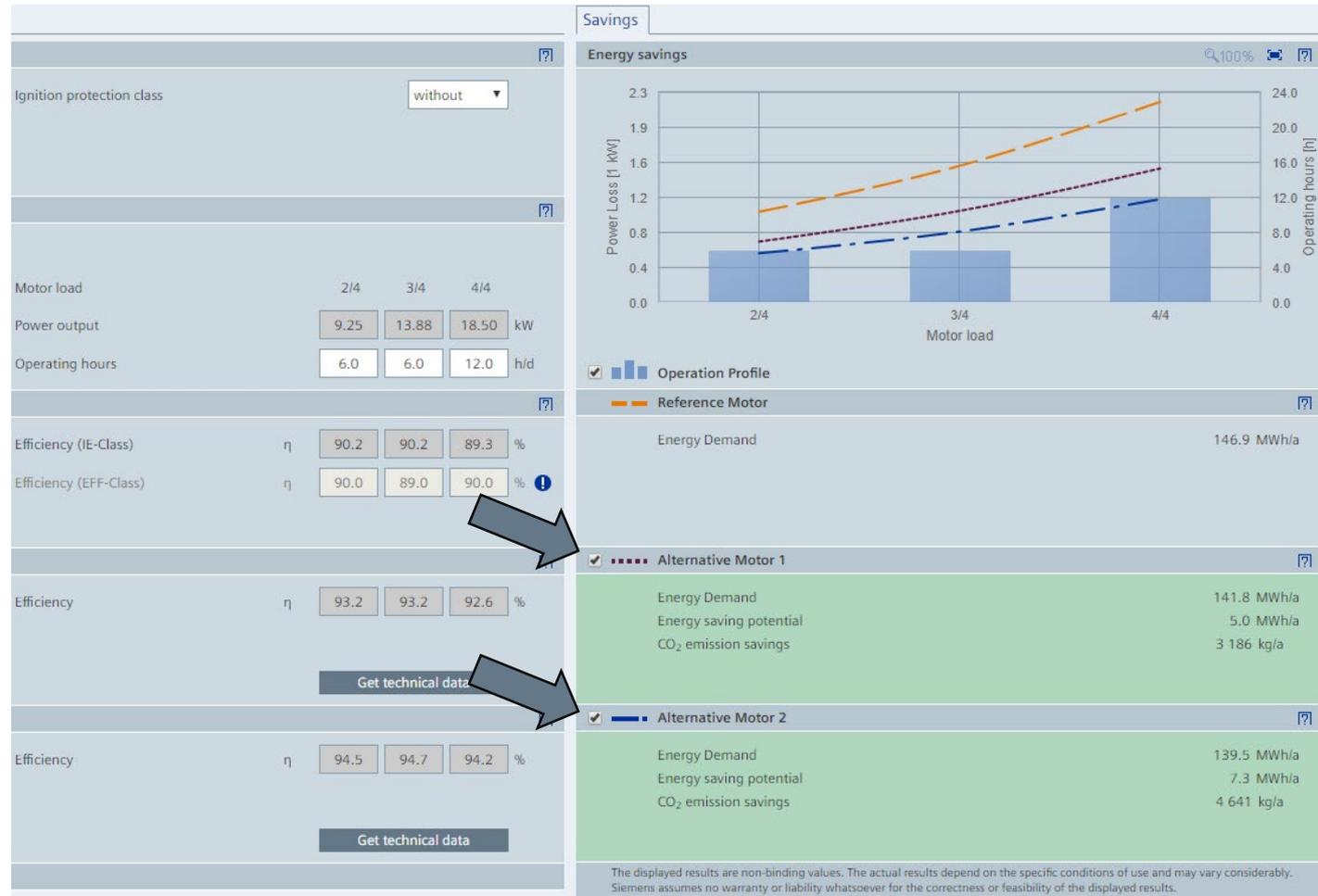
The screenshot shows the 'Technical view' of a motor comparison tool. The interface is divided into several sections:

- Motor Profile:** Includes fields for Power (P_N 18.5 kW), Pole number (4), Line supply (3AC / 400 V / 50 Hz), and Ignition protection class (without).
- Operation Profile:** Includes Operation Profile (Default), Operation-days / year (365 d/a), Operation-hours / day (24.0 h/d), and Operation-hours / year (8760.0 h/a). It also shows Motor load (2/4, 3/4, 4/4) and Power output (9.25, 13.88, 18.50 kW).
- Reference Motor: Default:** Shows Efficiency class (EFF2 / IE1), Casting, and Efficiency (IE-Class) (90.2, 90.2, 89.3 %).
- Alternative Motor 1: SIMOTICS GP:** Shows Efficiency class (IE3), Casting (Aluminum), and Efficiency (93.2, 93.2, 92.6 %).
- Alternative Motor 2: SIMOTICS GP:** Shows Casting, Efficiency (85.1, 86.0, 85.7 %).

A pop-up window is visible over the Alternative Motor 2 section, showing a text input field with the value 'Default' and a dropdown arrow, indicating that the default name of the motor can be changed.

Motor comparison "Technical view"

- Once the [reference motors and alternative motors](#) have been defined, the **graphic representation** is displayed on the right-hand side
- The **calculated values** are displayed beneath the graphs
- Activation (or deactivation) of the checkboxes allows the selected motors to be shown (or hidden) in the **graph**



Motor comparison "Commercial view"

- **Commercial data** can be displayed and processed here using the "Commercial view" tab
- Once **prices** and **discounts** have been entered for the individual motors, these will then be taken into account for the evaluations

The screenshot shows the 'Commercial view' tab selected, indicated by a grey arrow. The interface is titled 'Compare energy efficient motors' and is divided into two main sections: 'Motor Profile' and 'Operation Profile'.

Motor Profile:

Power	P_N	18.5 kW	Ignition protection class	without
Pole number		4		
Line supply		3AC / 400 V / 50 Hz		

Operation Profile:

Operation Profile	Default				
Operation-days / year	365 d/a	Motor load	2/4	3/4	4/4
Operation-hours / day	24.0 h/d	Power output	9.25	13.88	18.50 kW
Operation-hours / year	8 760.0 h/a	Operating hours	6.0	6.0	12.0 h/d

Below the profiles, there are two motor options:

Reference Motor: Default

Efficiency class	EFF2 / IE1	Price	<input type="text" value="0"/> €
Casting			

Alternative Motor 1: SIMOTICS GP

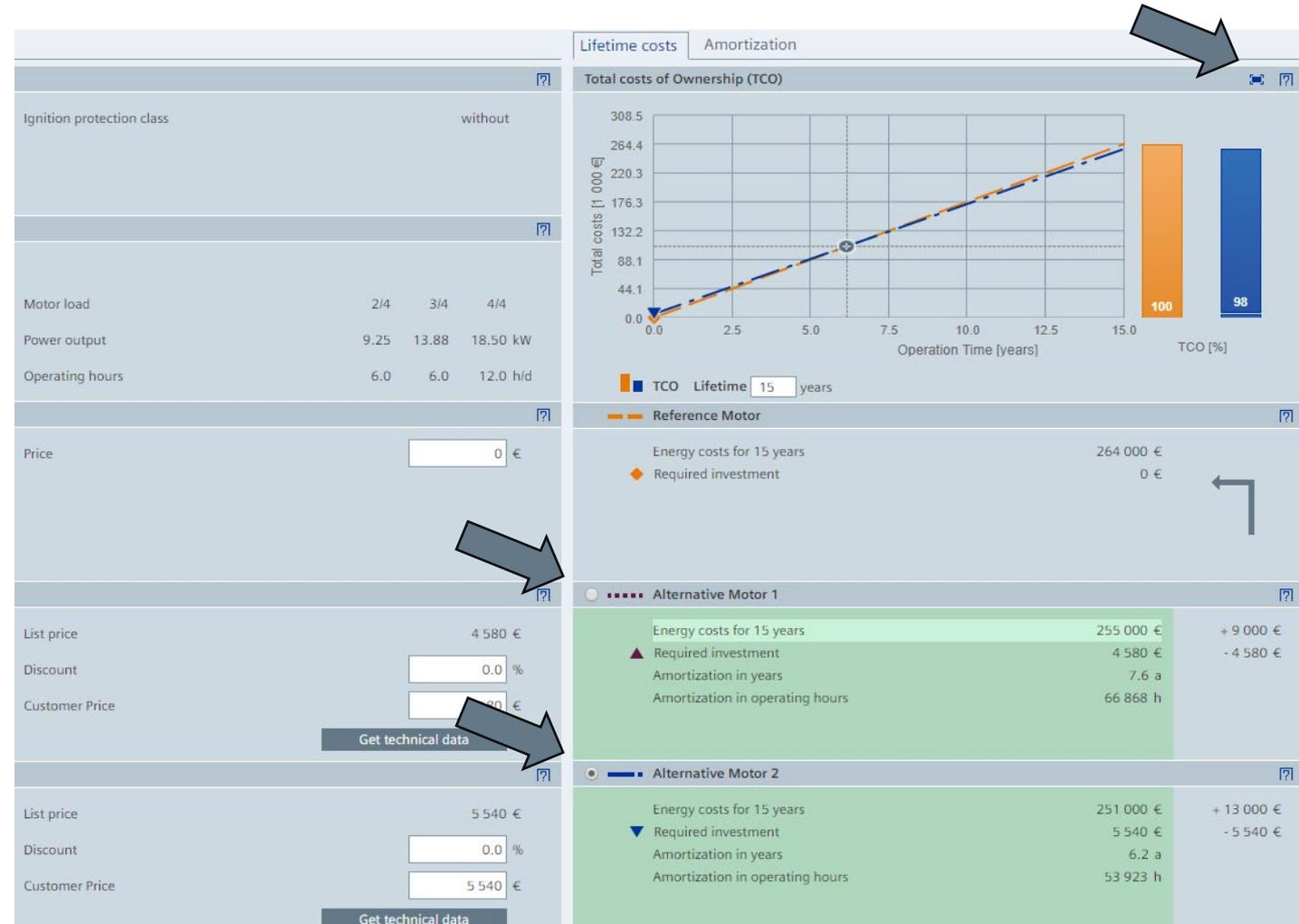
Efficiency class	IE3	List price	4 580 €
Casting	Aluminum	Discount	<input type="text" value="0.0"/> %
		Customer Price	<input type="text" value="4 580"/> €
<input type="button" value="Get technical data"/>			

Alternative Motor 2: SIMOTICS GP

Efficiency class	IE4	List price	5 540 €
Casting	Aluminum	Discount	<input type="text" value="0.0"/> %
		Customer Price	<input type="text" value="5 540"/> €
<input type="button" value="Get technical data"/>			

Motor comparison "Commercial view"

- The **graphic** as well as the **numerical results** appear analogously on the right-hand side, relative to the selected alternative motor(s)
- Switching between the commercial and technical view in **full screen mode** facilitates a much clearer comparison and presentation of the results

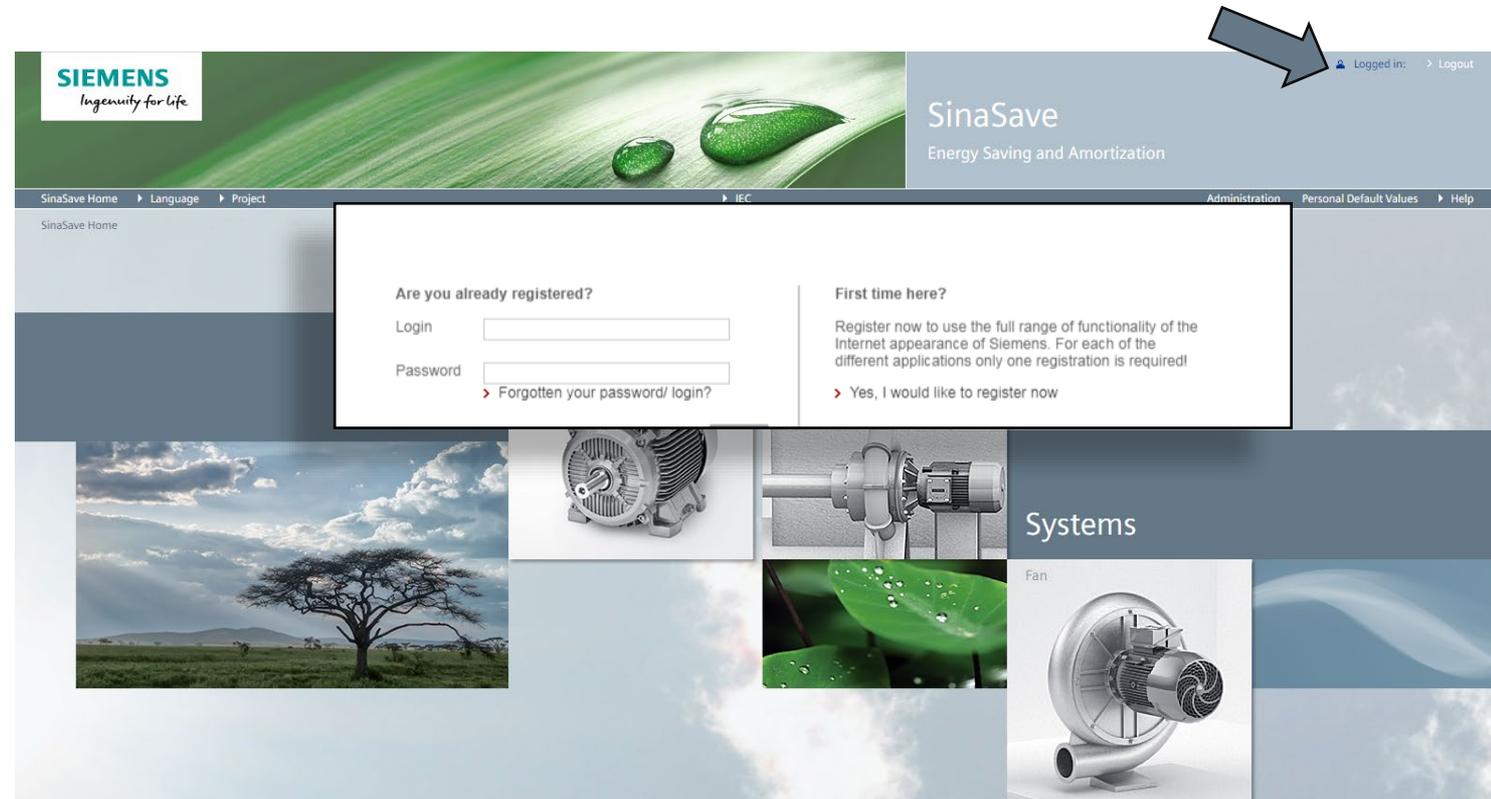




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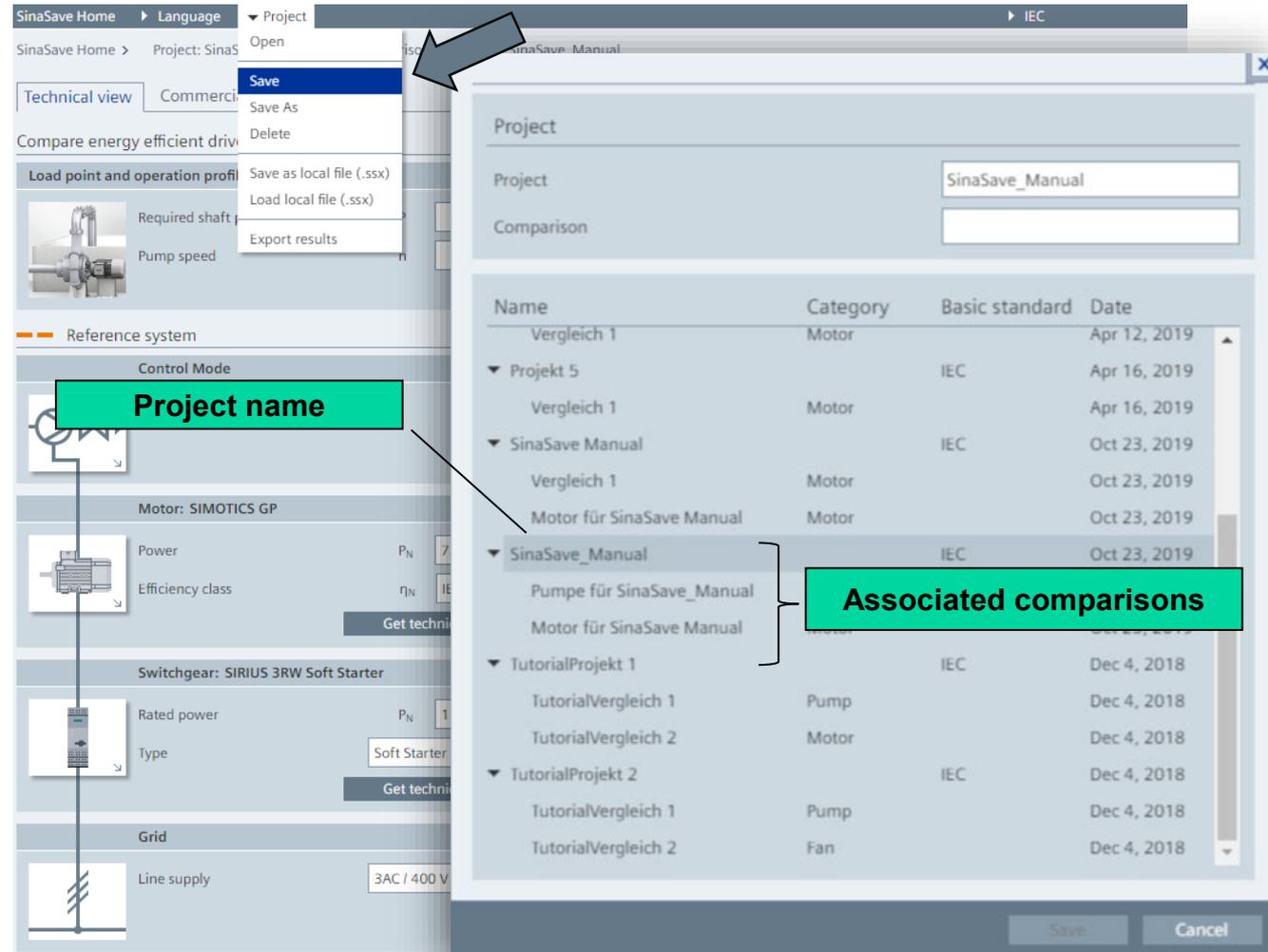
Projects / Saving / Loading

- **Login is necessary** to access the following SinaSave functions. A login function is provided in the upper, right-hand section of the screen
- Login can be performed at any time (even after a comparison has been entered), without the risk of losing any information.



Projects / Saving / Loading

- To create or to save a project, the "Save As" call is provided under "Project" in the menu bar
- Every comparison is associated with a project, and each project can contain multiple comparisons
- To save, names must be **assigned to the project and the comparison itself**. This automatically creates a new project
- If projects are already available, the comparison can alternatively also be added to one of these existing projects



Projects / Saving / Loading

- The **navigation bar** (Navbar) is displayed after the project was saved with the new comparison
- It shows the **name of the currently opened project** and **comparison**
- A click on the project name takes you back to the "Project view"

SinaSave Home > Language > Project > IEC

SinaSave Home > Project: SinaSave_Manual > Comparison: Motor für SinaSave Manual

Technical view Commercial view

Compare energy efficient motors

Motor Profile

Power P_N 18.5 kW Ignition protection class without

Pole number 4

Line supply 3AC / 400 V / 50 Hz

Operation Profile

Operation Profile Default

Operation-days / year 365 d/a Motor load 2/4 3/4 4/4

Operation-hours / day 0.0 h/d Power output 9.25 13.88 18.50 kW

Operation-hours / year 0.0 h/a Operating hours 6.0 6.0 12.0 h/d

Reference Motor: Default

Efficiency class EFF2 / IE1 Efficiency (IE-Class) η 90.2 90.2 89.3 %

Casting Casting Efficiency (EFF-Class) η 90.0 89.0 90.0 %

Alternative Motor 1: SIMOTICS GP

Efficiency class IE3 Efficiency η 93.2 93.2 92.6 %

Casting Aluminum

Get technical data

+ New Motor

Projects / Saving / Loading

- The **project view** is subdivided into several areas
- The area highlighted here allows the possibility of editing the **project header data**
- This information is subsequently provided on the cover sheet of the export file (.pdf or .docx)

SinaSave Home > Language > Project > IEC

SinaSave Home > Project SinaSave_Manual*

Project view

Combine several comparisons to one project

Project view

Combine several comparisons to one project

Project

Customer: SinaSave User | Project name: SinaSave_Manual

Company: Siemens AG | Facility:

Department: DI MC LVM PPM TS&AR | Date: October 23-2019

Phone: |

Email: |

Comment: |

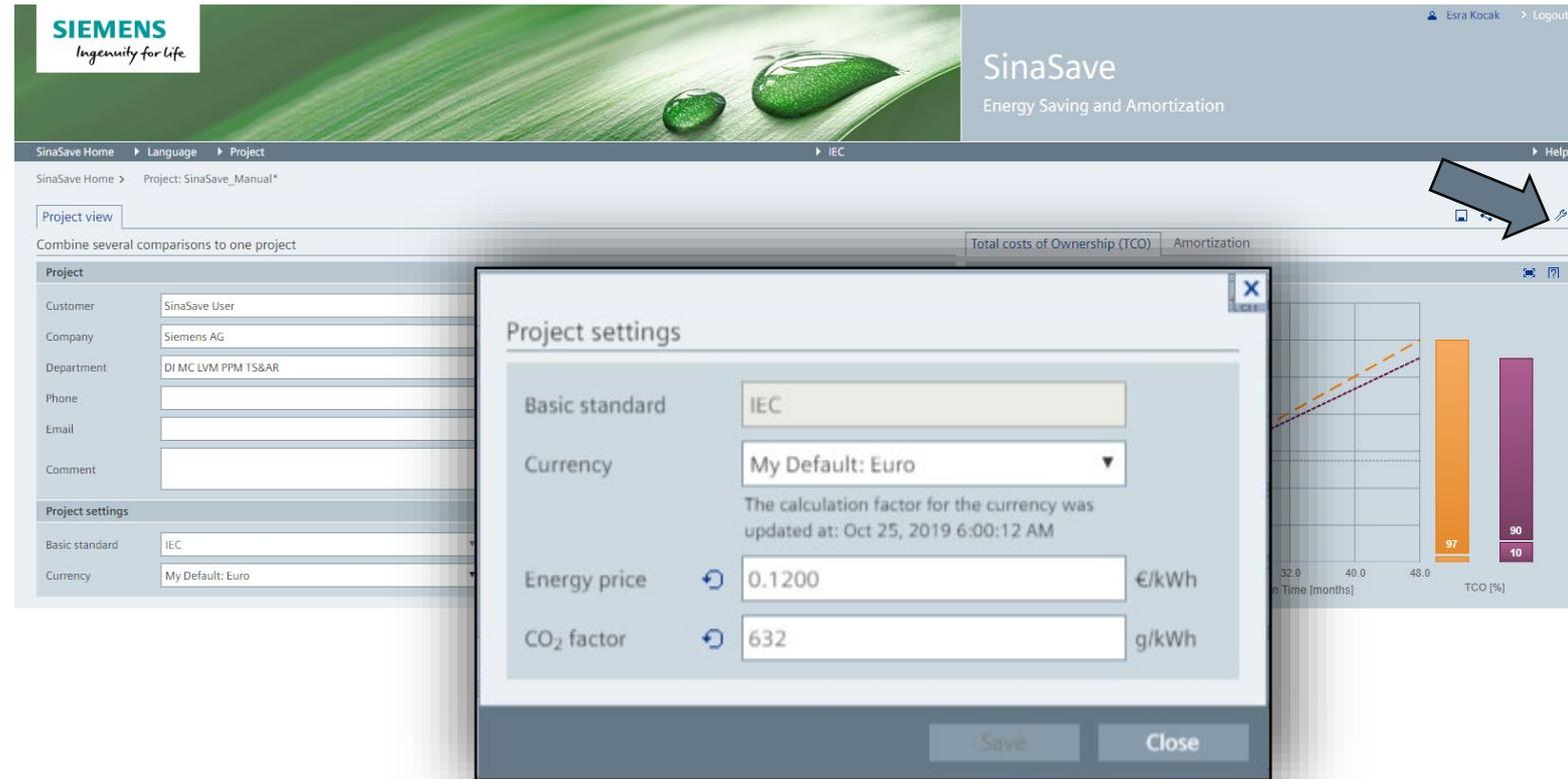
Currency: My Default: Euro | CO₂ factor: 632 g/kWh

2 single comparisons [+ Create new comparison](#) [Copy existing comparison](#)

Nr.	Active	Comparison/Selection	Qty.	Results	Actions
01	<input checked="" type="checkbox"/>	 Pumpe für SinaSave_Manual Alternativsystem	1	Energy savings: 24.4 MWh/a Investment costs: 4 352 € Amortization time: 6.5 mo.	   
02	<input checked="" type="checkbox"/>	 Motor für SinaSave Manual Alternative motor - IE3	1	Energy savings: 5.0 MWh/a Investment costs: 4 580 € Amortization time: 7.6 a	   

Projects / Saving / Loading

- For example, the currency and the energy price have been adapted here using the “” button.



The screenshot displays the Siemens SinaSave web application interface. The top navigation bar includes the Siemens logo, the user name 'Esra Kocak', and a 'Logout' link. The main content area shows a 'Project view' for 'SinaSave_Manual*'. A 'Project settings' dialog box is open, showing the following configuration:

Setting	Value	Unit
Basic standard	IEC	
Currency	My Default: Euro	
Energy price	0.1200	€/kWh
CO ₂ factor	632	g/kWh

The dialog box also includes a 'Save' button and a 'Close' button. In the background, a chart shows 'Total costs of Ownership (TCO)' over 'Time [months]'. The chart displays two bars: an orange bar at 97% and a purple bar at 90%. The x-axis ranges from 32.0 to 48.0 months, and the y-axis represents TCO [%].

Projects / Saving / Loading

- The **list of comparisons** is provided beneath the project view
- This list allows an overview of the comparisons associated with the project. **Key information** (e.g. name, type, etc.) and the **most important results** are represented within the comparisons
- A "quantity" can be stored here if a comparison is featured more than once in a system or plant, e.g. several identical pumps **with the same [operation profile](#)**
- The "Actions" area allows an individual comparison to be **opened, shared (email), exported or deleted**

SinaSave Home > Language > Project > IEC

SinaSave Home > Project: SinaSave_Manual*

Project view

Combine several comparisons to one project

Project

Customer: SinaSave User | Project name: SinaSave_Manual
Company: Siemens AG | Facility: |
Department: DI MC LVM PPM TS&AR | Date: October 23-2019
Phone: |
Email: |
Comment: |

Project settings

Basic standard: IEC | Energy price: 0.1200 €/kWh
Currency: My Default: Euro | CO₂ factor: 632 g/kWh

2 single comparisons + Create new comparison Copy existing comparison

Nr.	Active	Comparison/Selection	Quantity	Results	Actions
01		Pumpe für SinaSave_Manual		Energy savings: 24.4 MWh/a	[Folder] [Share]
02	<input checked="" type="checkbox"/>	Motor für SinaSave Manual Alternative motor - IE3	1	Energy savings: 5.0 MWh/a Investment costs: 4 580 € Amortization time: 7.6 a	[Folder] [Share] [Export] [Delete]
		Alternative motor - IE3	1	Investment costs: 4 580 € Amortization time: 7.6 a	[Folder] [Share] [Export] [Delete]

Projects / Saving / Loading

- Within the project view, a system or motor comparison can be **selected** and **created**
- Upon selection of a system or motor, the user is returned to the standard "Technical view"

The screenshot shows the SinaSave software interface. At the top, there are navigation tabs for 'SinaSave Home', 'Language', and 'Project', with 'IEC' selected. Below this, the breadcrumb 'SinaSave Home > Project: SinaSave_Manual*' is visible. A 'Project view' tab is active. The main content area is titled 'Combine several comparisons to one project' and contains a 'Project' form with fields for Customer (SinaSave User), Company (Siemens AG), Department (DI MC LVM PPM TS&AR), Project name (SinaSave_Manual), Facility, Date (October 23-2019), Phone, Email, and Comment. Below the project form is the 'Project settings' section, which includes a dropdown for 'Basic standard' (IEC), a dropdown for 'Currency' (My Default: Euro), an input field for 'Energy price' (0.1200 €/kWh), and an input field for 'CO2 factor' (32 g/kWh). A grey arrow points to the 'CO2 factor' field. Below the settings, there are two buttons: '+ Create new comparison' and 'Copy existing comparison'. The bottom section is a table titled '2 single comparisons' with columns for 'Nr.', 'Active', 'Comparison/Selection', 'Qty.', 'Results', and 'Actions'. The table contains two rows: one for 'Pumpe für SinaSave_Manual' with a quantity of 1, and another for 'Alternative motor - IE3' with a quantity of 1. A dropdown menu is open over the table, showing options for 'Pump', 'Fan', and 'Motor'.

Projects / Saving / Loading

- Once the **comparison** has been edited (refer to chapters "Motor comparison", "System comparison for pumps and fans"), it can be **saved** via the quick menu
- The project name has already been selected
- The name proposed for the created comparison can be accepted with "Save" or may be renamed manually



Projects / Saving / Loading

- You can now find the motor comparison just created in the comparison list of the project view

SinaSave Home > Project: SinaSave_Manual

Project view

Combine several comparisons to one project

Project

Customer	SinaSave User	Project name	SinaSave_Manual
Company	Siemens AG	Facility	
Department	DI MC LVM PPM TS&AR	Date	October 23-2019
Phone			
Email			
Comment			

Project settings

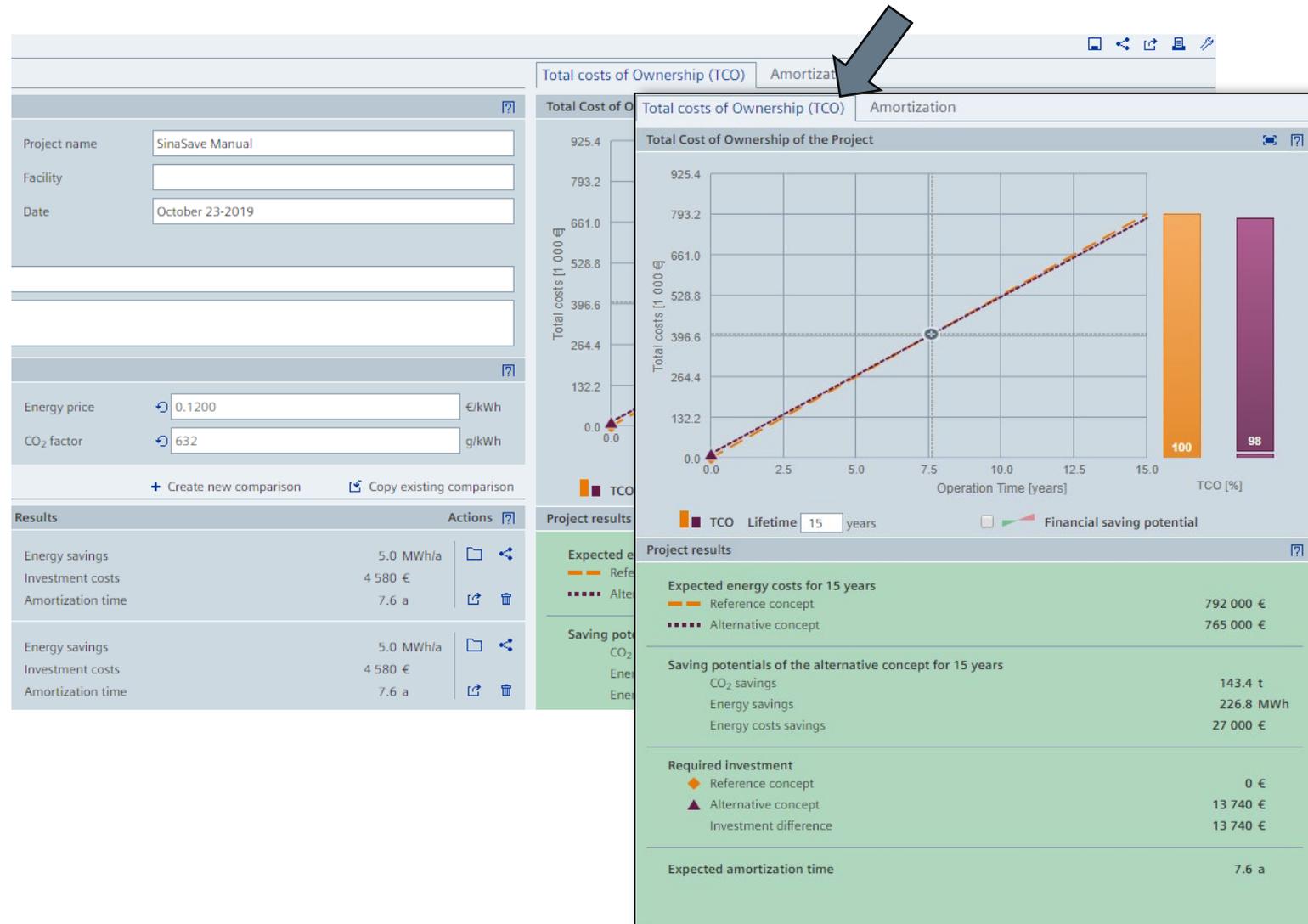
Basic standard	IEC	Energy price	0.1200 €/kWh
Currency	My Default: Euro	CO ₂ factor	632 g/kWh

2 single comparisons

Nr.	Active	Comparison/Selection	Qty.	Results	Actions
01	<input checked="" type="checkbox"/>	 Pumpe für SinaSave_Manual Alternativsystem	1	Energy savings: 24.4 MWh/a Investment costs: 4 352 € Amortization time: 6.5 mo.	  
02	<input checked="" type="checkbox"/>	 Motor für SinaSave Manual Alternative motor - IE3	1	Energy savings: 5.0 MWh/a Investment costs: 4 580 € Amortization time: 7.6 a	  

Projects / Saving / Loading

- The results of **each active comparison** are taken into account in the **project results**
- The "Lifetime costs" and "Amortization" as well as the "Project results" topic do not reflect the **result of a single comparison**, but **that of the complete project**





1. The SinaSave Tool
2. Tool layout and structure
3. System comparison for pumps and fans
4. Motor Comparison
5. Projects / Saving / Loading
- 6. Sharing and exporting results**

Sharing (email) and exporting (.pdf/.docx) results

- **Login is necessary** to access the following SinaSave functions. A login function is provided in the upper, right-hand section of the screen
- **Initial situation:** A project has been created and should now be saved locally for subsequent processing (.ssx), then exported (.pdf / .docx), and forwarded to colleagues (email)

SIEMENS
Ingenuity for Life

SinaSave
Energieeinsparung und Amortisation

Anmelden

SinaSave Home Sprache Projekt IEC Einstellungen Hilfe

Are you already registered?

Login

Password

> Forgotten your password/ login?

First time here?

Register now to use the full range of functionality of the Internet appearance of Siemens. For each of the different applications only one registration is required!

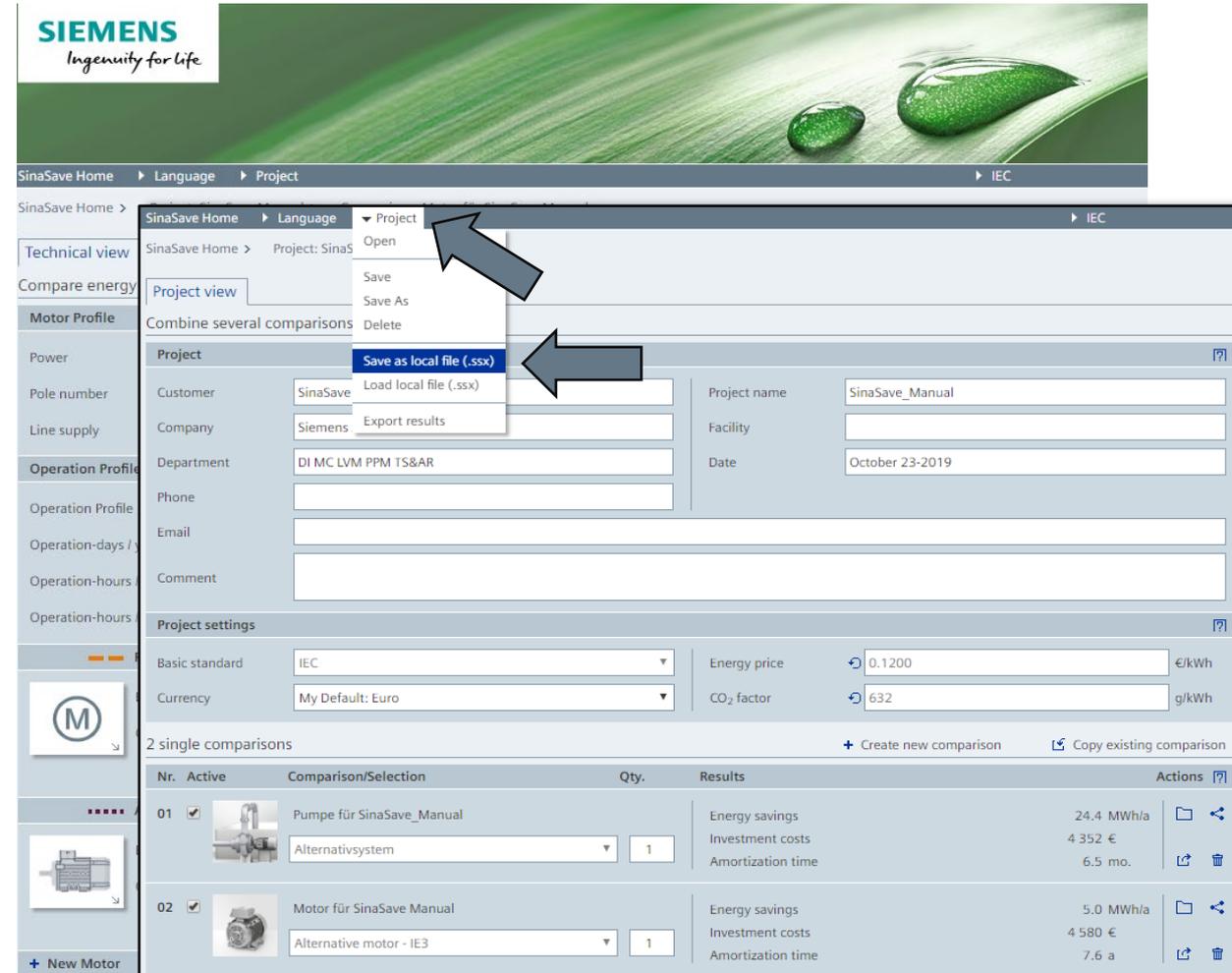
> Yes, I would like to register now

Lüfter

Sharing (email) and exporting (.pdf/.docx) results

Saving / loading results locally

- The **project view** is opened by clicking on the project name (here: SinaSave_Manual) in the **navigation bar**
- Via the "Project" menu item, the results can be saved locally, in other words on the respective computer being used ("Save as local file"), from where it may be subsequently loaded again ("Load local file")
- .ssx is a unique data format used by SinaSave



The screenshot displays the Siemens SinaSave software interface. At the top, the Siemens logo and tagline 'Ingenuity for Life' are visible. The navigation bar includes 'SinaSave Home', 'Language', and 'Project'. The 'Project' menu is open, showing options: 'Open', 'Save', 'Save As', 'Delete', 'Save as local file (.ssx)', 'Load local file (.ssx)', and 'Export results'. Two blue arrows point to the 'Project' menu and the 'Save as local file (.ssx)' option. The main interface shows a form for project settings, including fields for Customer (SinaSave), Company (Siemens), Department (DI MC LVM PPM TS&AR), Project name (SinaSave_Manual), Facility, Date (October 23-2019), and Project settings (Basic standard: IEC, Energy price: 0.1200 €/kWh, Currency: My Default: Euro, CO2 factor: 632 g/kWh). Below the settings, there is a table with 2 single comparisons:

Nr.	Active	Comparison/Selection	Qty.	Results	Actions
01	<input checked="" type="checkbox"/>	Pumpe für SinaSave_Manual Alternativsystem	1	Energy savings: 24.4 MWh/a Investment costs: 4 352 € Amortization time: 6.5 mo.	  
02	<input checked="" type="checkbox"/>	Motor für SinaSave Manual Alternative motor - IE3	1	Energy savings: 5.0 MWh/a Investment costs: 4 580 € Amortization time: 7.6 a	  

Sharing (email) and exporting (.pdf/.docx) results

Exporting results

- Results can be exported via the **quick menu**. Clicking on the **export symbol**  opens a dialog which provides an option to select either **DOCX** or **PDF**
- In addition to the file format, various contents are also available for selection:
 - a **summary of the project results**
 - a **project summary including all detailed information** for comparisons incorporated in the project

The screenshot shows the Siemens software interface with the 'Export' dialog box open. The background displays a 'Total Cost of Ownership (TCO)' chart and a table of results. The 'Export' dialog is open, allowing selection of format (PDF or DOCX) and content (Summary of the project or Summary of the project, inclusive details of active comparisons).

Export Dialog Options:

- as PDF-file
 - Summary of the project
 - Summary of the project, inclusive details of active comparisons
- as DOCX-file

Background Chart Data (Approximate):

Time [months]	TCO [%]
32.0	66.4
40.0	78.0
48.0	90.0

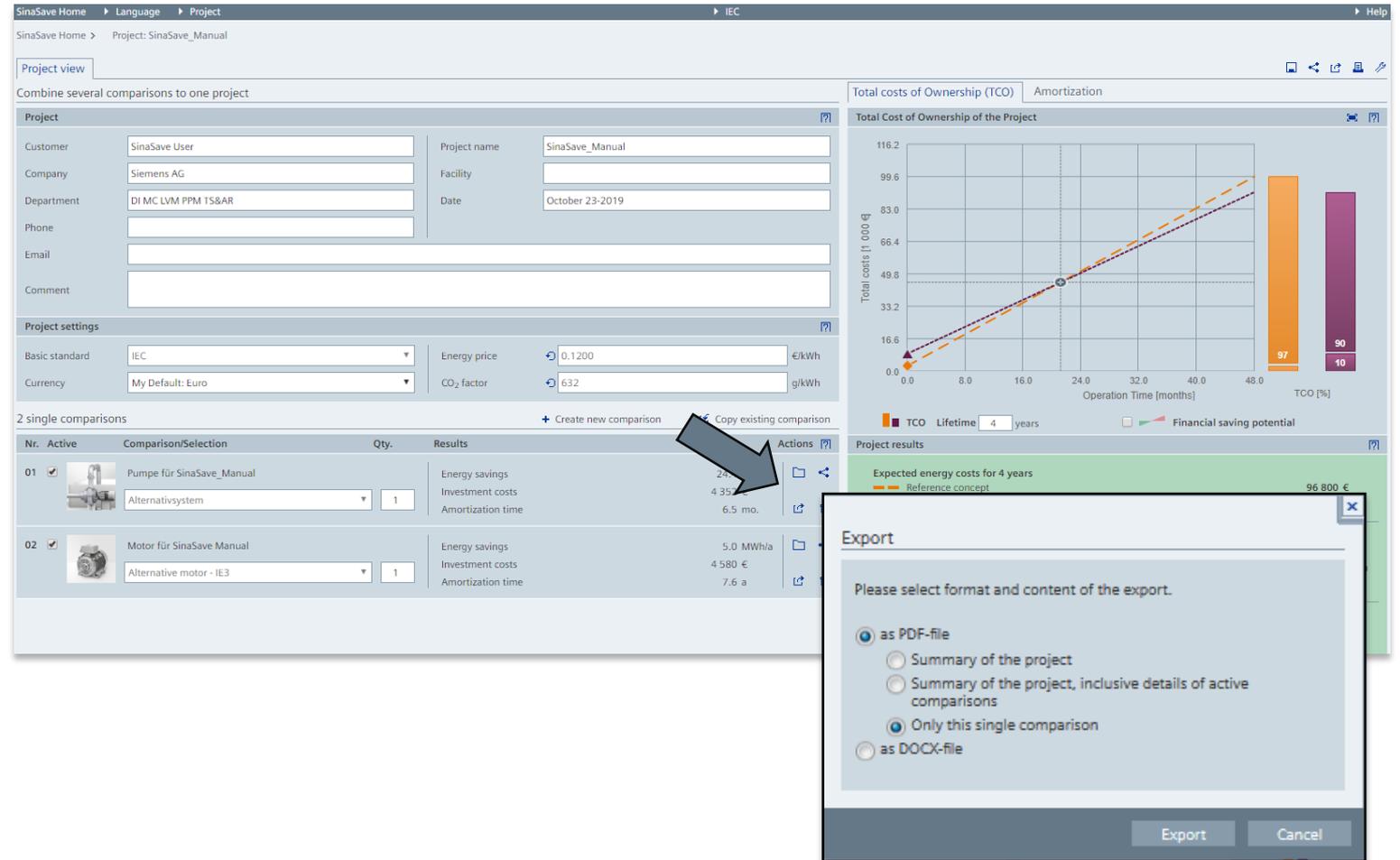
Background Table Data (Approximate):

Category	Value
Energy savings	96 800 €
Investment costs	82 400 €
Amortization time	7.6 a
Energy savings	74.5 t
Investment costs	118.0 MWh
Amortization time	14 120 €
Required investment	2 750 €
Reference concept	8 930 €
Alternative concept	6 180 €
Investment difference	
Expected amortization time	21.0 mo.

Sharing (email) and exporting (.pdf/.docx) results

Exporting results

- The **export symbol**  is also provided in the "List of single comparisons"
- There is also a possibility here to export **results of a single comparison**



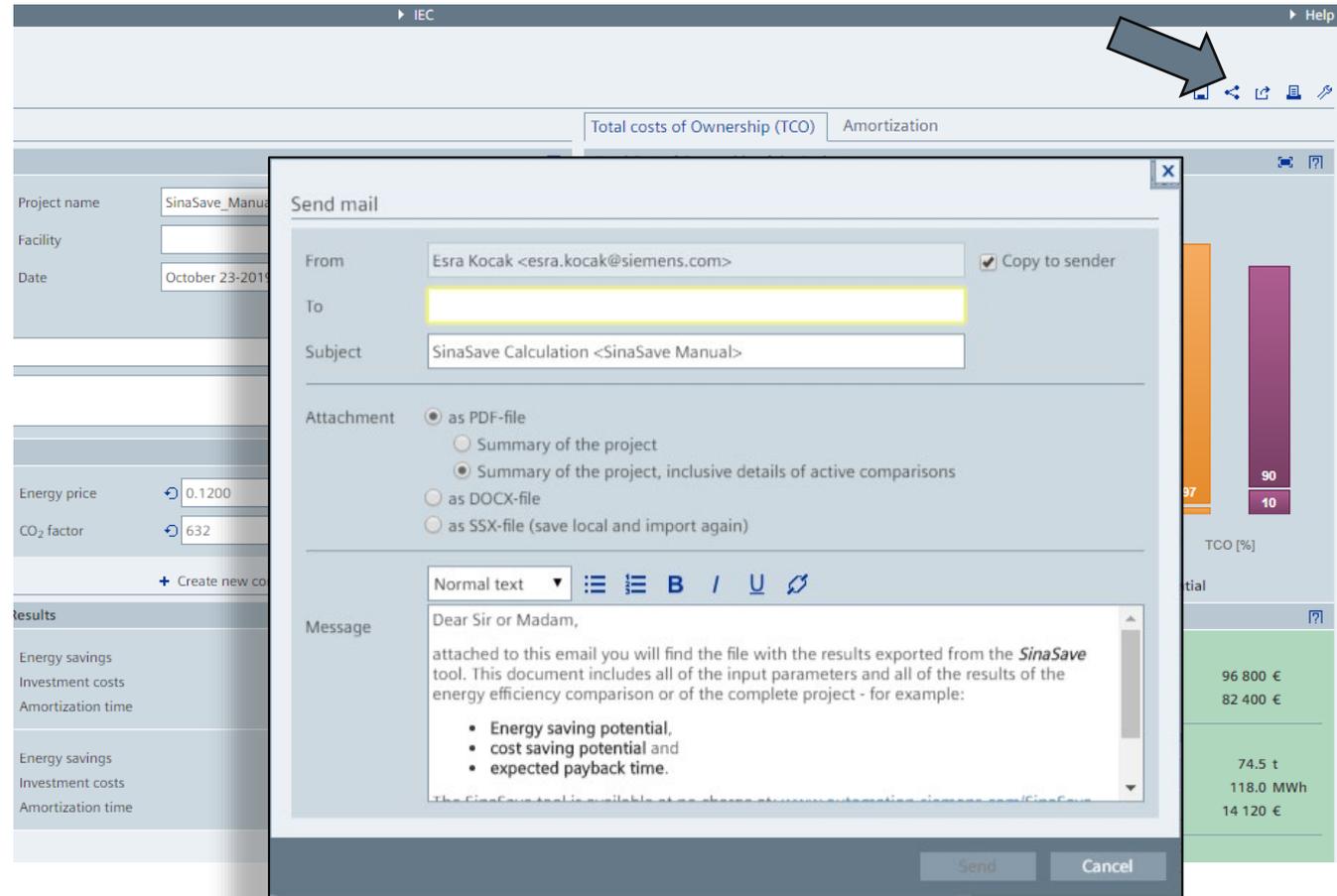
The screenshot displays the SinaSave software interface. The top navigation bar includes 'SinaSave Home', 'Language', 'Project', and 'IEC'. The main area is divided into several sections:

- Project view:** A header section with a 'Project view' tab and a 'Combine several comparisons to one project' option.
- Project settings:** A form with fields for Customer (SinaSave User), Company (Siemens AG), Department (DI MC LVM PPM TS&AR), Project name (SinaSave_Manual), Facility, Date (October 23-2019), Energy price (0.1200 €/kWh), and CO₂ factor (632 g/kWh).
- Comparison table:** A table with 2 single comparisons. A grey arrow points to the 'Actions' column, specifically the export icon for the first comparison.
- Total costs of Ownership (TCO) Amortization:** A chart showing 'Total Cost of Ownership of the Project' over 'Operation Time [months]'. The y-axis represents 'Total costs [1 000 €]' and the x-axis represents 'Operation Time [months]'. A legend indicates 'TCO Lifetime: 4 years' and 'Financial saving potential'.
- Project results:** A summary section showing 'Expected energy costs for 4 years' as 96 800 €.
- Export dialog box:** A modal window titled 'Export' with the text 'Please select format and content of the export.' It offers options: 'as PDF-file' (selected), 'Summary of the project', 'Summary of the project, inclusive details of active comparisons', 'Only this single comparison', and 'as DOCX-file'. 'Export' and 'Cancel' buttons are at the bottom.

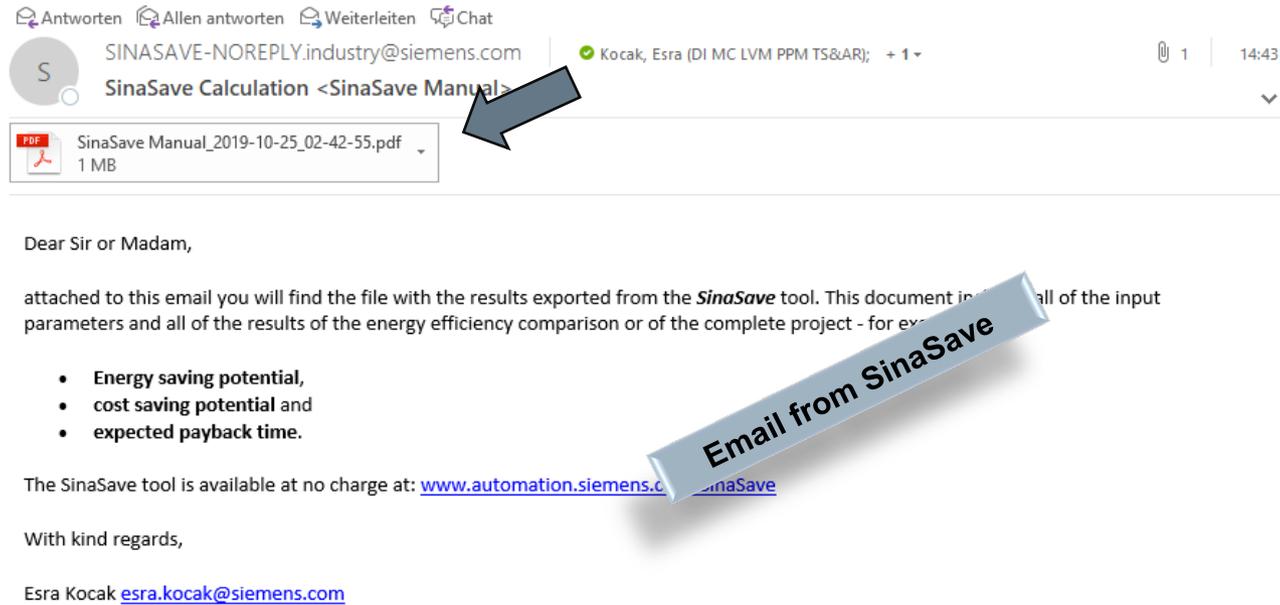
Sharing (email) and exporting (.pdf/.docx) results

Sharing results via email

- The **share symbol**  in the quick menu allows **results** from SinaSave **to be shared** with colleagues or customers. Thus, an **email** which conveys the respective results as an **attachment** can be sent directly from the tool
- This functions as follows:
 - Enter an email address in the "To" field
 - Selection of the desired format and content (email attachment)
 - (Adaptation of the text in the "Message" field)
 - Send



Sharing (email) and exporting (.pdf/.docx) results



Project name	SinaSave Manual
Facility	
Date	October 23-2019
Comment	

I Thank you for your attention!

For further information and support, please contact:

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