SWEET Call 1-2024: Pre-proposal

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***General instructions on preparing SWEET pre-proposals***

*To ensure fair treatment of all proposals:*

1. *The font (Arial), font size (10 pt., 9 pt. in the provided tables), line spacing (1.15), and margins must not be changed, otherwise your proposal will not be evaluated.*
2. *Content that exceeds the specified page limits will be removed before your proposal is forwarded to the evaluation panel.*
3. *Hyperlinks to external content that could be interpreted as an attempt to circumvent page limits will be removed before the proposal is forwarded to the evaluation panel.*

*Instructions are typeset in italics and come in two types:*

1. *Instructions in red* ***must be removed*** *before submitting the proposal or be replaced by the requested content.*
2. *Instructions in black* ***must not be removed*** *because they indicate to the evaluation panel what content the SFOE expected to be provided. The specified page limits include the instructions in black.*

*SWEET pre-proposals are a shortened and simplified form of full proposals:*

1. *You do not yet have to divide work packages into tasks.*
2. *You do not yet have to present Gantt charts for work packages.*
3. *You do not yet have to present a risk-management plan.*
4. *You do not yet have to present a data-management plan.*
5. *You do not yet have to include CVs for all members.*

# Administrative information

*Limit: none*

Table 1‑1: Proposal overview

|  |  |
| --- | --- |
| **Consortium name** |  |
| **Consortium acronym** | *Max. 15 characters* |
| **Host institution** |  |
| **Coordinator** | Title |  |
| Name |  |
| Member entity |  |
| Address |  |
| Phone |  |
| Email |  |
| **Portfolio budget (excl. P+D projects)[[1]](#footnote-1) [CHF]** |  |
| **SWEET funding1** [CHF] |  | Own contribution**1** [CHF] |  | Third-party contribution**1** [CHF] |  |
| **Abstract (max. 250 words)** | Provide a short summary of the objectives of the consortium, their pertinence to the research challenge and the expected outcomes. Use plain text and avoid formulas and other special characters.  |
| **Keywords** | *max. 5, separated by commas* |

*Dedicate in the table below one line to each member entity (see Call Guideline, Table 3-2). Include the name of one member (e.g., the PI) who leads the member entity’s contributions to the consortium.*

*Note that:*

* *Only the member entities listed in Table 1-2 are eligible to receive SWEET funding through the host institution. The number of members defined in this table enters the calculation of the core budget (see Call Guideline, Section 3.4.1).*
* *A one-A4 page curriculum vitae (CV) of key position members (and only these) is required at the pre-proposal stage (see Call Guideline, Section 4.2.4). The consortium is encouraged to create its own CV template.*

Table 1‑2: List of member entities

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| N° | Members:* + - * Legal name of member institution
* Name of member entity
* Name of one member
* Email/phone of member
 | Short name of member entity | Type of organisation[[2]](#footnote-2) | Canton or country[[3]](#footnote-3) | Language region of CH | Member of other (funded) SWEET consortia |
| M1  | *Host institution**Department/group/laboratory**Coordinator**Email, phone* |  |  |  |  | *Acronyms of consortia* |
| M2 | *Member institution* *Department/group/laboratory Person (e.g., the PI)**Email, phone* |  |  |  |  |  |
|  |  |  |  |  |  |  |

*Dedicate in the table below one line to each collaboration partner. Include the name of one contact person (e.g., the PI) who leads that partner’s activities within the extended consortium.*

Table 1‑3: List of collaboration partners

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| N° | Collaboration partner:* Legal name of organisation
* Name of group/laboratory
* Name of one representative
* Email/phone of representative
 | Short name  | Type of organisation[[4]](#footnote-4) | Canton or country | Language region of CH |
| C1  | *Organisation* *Department/group/laboratory**Person**Email, phone* |  |  |  |  |
| C2 | *Organisation* *Department/group/laboratory**Person**Email, phone* |  |  |  |  |
|  |  |  |  |  |  |

# Preliminary stakeholder analysis

*Limit: 2 pages*

*Provide a preliminary analysis of the stakeholders that are relevant to this SWEET call. (Note that the stakeholder analysis to be provided here applies to the call and not just your consortium. You may choose to base your analysis on the stakeholder mapping provided by the SWEET Office. The qualifier “preliminary” is used to indicate that the stakeholder analysis should be refined during the preparation of the full proposal and updated periodically during the implementation phase of your consortium.) You are strongly encouraged to use a systematic approach to conduct your stakeholder analysis, see the document “Support for Improved Implementation of Inter-/Transdisciplinarity in SWEET”. Show how the stakeholders span the innovation system (see Figure 1-2 in the Call Guideline). State the criteria you use to prioritise the stakeholders and present a prioritized list of stakeholders. In Section 4.1, you will be required to explain which of the stakeholders on the prioritized list are represented in your consortium. You are encouraged to illustrate your stakeholder analysis in graphical form.*

# Ambition

*Limit: 3 pages*

## Expected outcomes

*State the consortium’s expected outcomes.[[5]](#footnote-5) (The qualifier “expected” is used to reflect the uncertainty associated with outcomes over the duration of SWEET consortia.) You are strongly encouraged to use a systematic approach to develop and formulate your expected outcomes (see the document “Support for Improved Implementation of Inter-/Transdisciplinarity in SWEET”). For each expected outcome, state how it is relevant to the research challenges and how it contributes to achieving the targets of the Energy Strategy 2050 and the long-term climate strategy. Furthermore, for each expected outcome, state how it will affect your stakeholders and which stakeholders will affect it. Finally, for each expected outcome, state which qualitative and/or quantitative indicator(s) you will use to assess your progress towards the outcome. You are encouraged to use graphical illustrations where appropriate.*

## Objectives

*State specific and measurable objectives for your consortium that are achievable within the consortium’s duration. Link your objectives to your expected outcomes. Your objectives should reflect – and be reflected in – your extended consortium (see Section 4) and the collaboration within your consortium (see Section 5).*

## Potential synergies and overlaps

*Explain how your expected outcomes and your objectives differ from or are similar to the expected outcomes and objectives of other Swiss research and innovation efforts (including, but not restricted to, SWEET consortia, Innosuisse Flagships, ETH Domain Joint Initiatives, and Catapults in the Coalition Green Energy Storage). Explain where you see potential synergies and how you could exploit them as well as where you see potential overlaps and how you plan to avoid them. (Here, the description can be kept relatively general. In Section 5, you will be required to describe collaborations in more detail.)*

# Extended consortium

## Overview

*Limit: 2 pages (this limit excludes Table 4‑1 and Table 4‑2, both of which should start on a new page and are not subject to a page limit)*

*Explain how your extended consortium enables an inter-/transdisciplinary approach commensurate with the research challenges, how your extended consortium reflects the prioritised list of stakeholders in Section 2, and how the members and collaboration partners complement each other. Use Table 4‑1 and Table 4‑2 to state the expertise (disciplinary and beyond disciplinary), the contributions to the expected outcomes given in Section 3.1, and the WPs in which the members and collaboration partners are involved. Explain which expertise you think is missing or underrepresented in the extended consortium and how you plan to include it in the future.*

Table 4‑1: Overview of the types of organisations of members, their expertise and contributions to the expected outcomes, and the WPs in which the members are involved. The numbering of the members must be identical to that in Table 1‑2.

|  |  |  |  |
| --- | --- | --- | --- |
| N° | Short name | Type of organisation[[6]](#footnote-6) | Expertise and contributions: Using keywords or brief sentences, state the expertise (disciplinary and beyond disciplinary), contributions to the expected outcomes, and WPs in which the member is involved. |
| M1 |  |  | Expertise: Contributions to expected outcomes: WP(s):  |
| M2 |  |  | Expertise: Contributions to expected outcomes: WP(s): |

Table 4‑2: Overview of the types of organisations of collaboration partners, their expertise and contributions to the expected outcomes, and the WPs in which the collaboration partners are involved. The numbering of the collaboration partners must be identical to that in Table 1‑3.

|  |  |  |  |
| --- | --- | --- | --- |
| N° | Short name | Type of organisation[[7]](#footnote-7) | Expertise and contributions: Using keywords or brief sentences, state the expertise (disciplinary and beyond disciplinary), contributions to the expected outcomes, and WPs in which the collaboration partner is involved. |
| C1 |  |  | Expertise: Contributions to expected outcomes:WP(s):  |
| C2 |  |  | Expertise: Contributions to expected outcomes: WP(s): |

## Key positions

*Limit: 1 page*

*In the sections below, provide the names of the coordinator, integration expert, and KTT expert and summarise their relevant expertise and experience. As stated in the Call Guideline, Section 3.2.4, the integration expert is responsible for the communication within the extended consortium and with other consortia and the CROSS activity, whereas the KTT expert is responsible for the communication, dissemination, and exploitation of the outputs of the extended consortium.*

### Coordinator

### Integration expert

### KTT expert

*Section 3.2.4 of the Call Guideline states that the KTT expert is expected to have at least 2 years of experience with KTT, preferably through programs with some similarities to SWEET. If this expectation is not met, explain why you believe that your KTT expert can nevertheless meet the responsibilities attached to this key position.*

## Diversity

*Limit: 0.5 page*

*Show that the consortium strives for gender diversity and reflects Switzerland’s diversity in terms of languages and regions.*

Table 4‑3: Gender diversity at the levels of coordinator and work-package leaders.

|  |  |  |
| --- | --- | --- |
| Total number of coordinator and WP leaders[[8]](#footnote-8) (1 leader/WP) | Total number of female coordinator and female WP leaders5 (1 leader/WP) | Ratio: (total number of female coordinator and female WP leaders) / (total number of coordinator and WP leaders) |
|  |  |  |

# Collaboration

*Limit: 5 pages*

## Overview

*Explain how the extended consortium will collaborate to achieve the expected outcomes and objectives given in Sections 3.1 and 3.2, respectively. Explain in particular how you will ensure that the extended consortium is more than the sum of its parts, i.e., how the members and the collaboration partners as well as the different disciplines will work together to achieve what they could not achieve on their own. State the responsibilities assigned to the coordinator, the integration expert, and the KTT expert; the authority each is granted to fulfil the responsibilities; and how they will collaborate and complement each other.*

## Management and coordination

### Governance

*Describe the structures and processes that you will use to manage your extended consortium. Explain how the challenges of establishing and managing an inter-/transdisciplinary collaboration are reflected in your structures and processes. Describe how you will ensure that your extended consortium remains focused on its objectives and how you will track the progress toward the expected outcomes. Describe the processes that will ensure the quality of the consortium’s outputs.*

### Adaptability and flexibility

*Describe how you plan to adapt to changing circumstances, which are unavoidable for consortia with durations of 6-8 years. For example, adaptations could be required, e.g., because of results showing that your initial research directions will not allow you to meet your objectives, because your research has unintended effects or generated new research challenges, or because of altered political/regulatory environments.*

*Describe how you will deal with the flexibility accorded to SWEET consortia, i.e., the supplementary budget, the ability to add/remove members, to refine work packages that start after the third year and will therefore not need to be described in detail in the full proposal. Note that consortia are not encouraged to reserve part of the core budget for unplanned activities (see Call Guideline, Section 3.4.1). If you decide to do so anyway, you must describe the processes by which funds from that budget are requested and granted or refused. You must also describe how the SFOE and the monitoring panel will be involved in these processes and in particular the decision whether a request is granted or refused.*

## Integration

*Describe your integration concept. You are strongly encouraged to use a systematic approach to develop and formulate your integration concept, see the document “Support for Improved Inter-/Transdisciplinarity in SWEET”. Explain how you will involve and incentivize the entire extended consortium to support your integration expert to contribute to integration within and between work packages as well as during the various phases of the research process (e.g., joint problem framing, formulation of research challenges and the work programme, execution of the work programme, evaluation of outputs, adaptation of research challenges and work programme). Where appropriate, illustrate in graphical form your approach to inter-/transdisciplinarity[[9]](#footnote-9). Of particular interest are figures that show which disciplines are involved and how disciplinary actors and stakeholders (scientists) and non-disciplinary actors and stakeholders (non-scientists) collaborate. Describe how you plan to periodically update your integration concept.*

*Describe the integration of your activities with those of the CROSS activity in the CoSi consortium and in particular how you will use and contribute to the CROSS scenarios. Note that any questions about the CROSS activity must be addressed to the SWEET Office, which will forward them to the person leading the activity. The questions and answers will be published on the SWEET website.*

|  |  |
| --- | --- |
| Description of the coordination with the CROSS activity | Resources [CHF] |
|  |  |

*Describe the integration of your activities with those of other SWEET consortia.*

|  |  |
| --- | --- |
| Consortium | Description of the coordination |
| DeCarbCH |  |
| EDGE |  |
| PATHFNDR |  |
| SURE |  |
| LANTERN |  |
| SWICE |  |
| CoSi (excl. CROSS) |  |
| reFuel.ch |  |

*Describe the integration of your activities with those of other projects (not necessarily funded by the SFOE).*

|  |  |  |
| --- | --- | --- |
| Funding source | Project name | Description of the coordination |
|  |  |  |

## Knowledge and technology transfer

*Describe your knowledge and technology transfer (KTT) concept. (Note that this section is restricted to a description of the concept. The activities must be described in the WP on KTT in Section 7.) Include the concept’s objectives; a list of the stakeholders you are targeting (based on the prioritized list of stakeholders in Section 2), when you plan to involve them, how you will reach them, and how they will affect your expected outcomes; a list of indicators for the communication, dissemination, and exploitation phases; how you plan to measure the indicators to assess the effectiveness of your concept; and how you plan to periodically update both your stakeholder analysis and the KTT concept. Note that for communication channels, the minimum is a website at* [*www.sweet-ACRONYM.ch*](http://www.sweet-ACRONYM.ch)*.*

# Overarching approach

*Limit: 2 pages for each research challenge, with each research challenge starting on a new page*

## Research challenge 1

*Describe your overarching approach to answering “How can alternative societal, economic, and technical measures reduce the hard-to-abate emissions and thereby lower the contributions of CCS and CDR that are currently foreseen to reach the Swiss net-zero target?”*

*Describe your approach to meeting the requirements attached to the research challenge:*

1. *The consortium is expected to explore alternative measures to reduce the hard-to-abate emissions and thereby lower the contributions of CCS and CDR that are necessary to meet Switzerland’s long-term climate targets.*
2. *It is not sufficient for the consortium to study demand-side mitigation and social aspects from a theoretical point of view; instead, the consortium must investigate the practical implementation of such measures by conducting transdisciplinary research with citizens, authorities, and other stakeholders at the intersection of society and science.*
3. *The alternative measures must be analysed with appropriate energy-system models where possible.*
4. *The model results must be assessed for their robustness, i.e., the sensitivity with respect to assumptions.*
5. *The consortium must build on the outputs of the CROSS activity and contribute to the continuing harmonization of assumptions, scenarios, and narratives/storylines by the CoSi consortium.*
6. *The consortium is expected to set aside resources for the interactions with CROSS, CoSi, and relevant other SWEET consortia.*

## Research challenge 2

*Describe your overarching approach to answering “What are robust pathways for building and operating a Swiss carbon capture, use, and transport, storage (CCUTS) infrastructure?”*

*Describe your approach to meeting the requirements attached to the research challenge:*

1. *The consortium must consider at least one pathway that meets the targets described in the Call Guideline, the pathway investigated as part of research challenge 1, and the scenarios developed as part of research challenge 3.*
2. *The costs of these pathways must be compared to the cost estimates from the EP2050+ excursus on negative emission technologies and CCS and the cost analysis of a CCS infrastructure in Switzerland.*
3. *The pathways must include a temporal sequence of decisions (i.e., which stakeholder should take which decision when) and consider the corresponding consequences.*
4. *The approach chosen by the consortium must embrace the highly dynamic environment through a transdisciplinary and agile design in order to develop reflexivity through recursiveness and to incorporate ongoing developments.*

## Research challenge 3

*Describe your overarching approach to answering* “*How can the sustainable potential of Swiss biomass best contribute to the net-zero target as a substitute for GHG-intensive materials, a source of renewable energy, and a source of negative emissions?*”

*Describe your approach to meeting the requirements attached to the research challenge:*

1. *The consortium is expected to develop a qualitative and quantitative framework that allows the contributions of Swiss biomass to the net-zero target and the trade-offs and conflicts between the various contributions to be assessed.*
2. *The consortium is expected to use the framework, which must include mass and energy balances, to develop scenarios that explore the different uses of Swiss biomass and assess the scenarios in terms of technical criteria (e.g., contributions to meeting electricity, heat and biofuel demands), economic criteria (e.g., cost, local revenue generation), social (e.g., acceptance), and environmental criteria (e.g., net GHG emissions, biodiversity, soil fertility/quality).*
3. *The cascade use of biomass has to consider the emission reduction as a substitute for GHG-intensive materials and be reconciled with the emission reduction scenarios developed as part of research challenge 1.*
4. *The consortium is expected to take existing data on Swiss biomass, such as the sustainable biomass potential from SCCER BIOSWEET as a starting point. Further data collection and analysis are within the scope of this call provided that the consortium demonstrates in the proposals that new findings are likely to significantly affect the answers to the research challenge.*
5. *For work conducted on natural systems (e.g., forests and agricultural soils), the consortium is expected to take a holistic approach and to demonstrate in the proposal how they address both risks and co-benefits in a quantitative manner.*
6. *The work conducted to answer this research challenge must be coordinated with the work conducted by the SWEET Consortium reFuel.ch on the use of animal manure for the production of sustainable fuels and platform chemicals.*

## Research challenge 4

*Describe your overarching approach to answering “How will your consortium make a concrete contribution to the targeted scaling phase between 2030 and 2050 through the further development of existing and novel processes and concepts along the entire CCS and CDR value chain (capture, transport, use, and storage)* *by increasing their efficiency, reducing their costs, reducing their environmental impacts, and addressing their public perception and social acceptance?”*

*Describe your approach to meeting the requirements attached to the research challenge:*

1. *The consortium is expected to implement several CCS and/or CDR projects that will make concrete contributions to the targeted scaling phase.*
2. *At least one of the projects must be based on technologies that are presently at a high enough TRL so that they can credibly be brought to TRL 8-9 no later than 2030.*
3. *The other projects may be based on technologies that are presently at a TRL below 4 (the lowest TRL typically funded by the P+D-programme), provided that there is a credible path to higher TRL and therefore eligibility for P+D-funding before the end of the consortium’s duration.*
4. *Consortia must present credible plans that detail which processes will be developed and specify milestones for the amounts of CO2 captured, transported, used, and stored throughout the consortium’s duration.*
5. *The use of CO2 in this research challenge is restricted to the use in permanent products.*
6. *Consortia are expected to justify their choices in the pre-proposal in terms of the anticipated reductions of the costs and environmental impacts relative to competing innovative and incumbent approaches.*
7. *Consortia must provide preliminary cradle-to-grave LCA estimates in terms of GHG emission reduction/removal in an appendix of the pre-proposal.*

# Work programme

## Overview

*Limit: 3 pages (including the figure of the interrelationships between WPs and the Gantt chart)*

*Describe the overall structure of the project portfolio and present in graphical form (one full A4 page format to ensure legibility) how the WPs interrelate, i.e., how they build on and feed into each other. Describe the positioning of the projects, i.e., where they are situated in the spectrum from ‘idea to application’ or from ‘lab to market’. Where appropriate, refer to* [*technology readiness levels*](https://www.bfe.admin.ch/bfe/en/home/forschung-und-cleantech/forschungsprogramme.exturl.html/aHR0cHM6Ly9wdWJkYi5iZmUuYWRtaW4uY2gvZW4vcHVibGljYX/Rpb24vZG93bmxvYWQvOTk1Mg%3D%3D.html) *(TRLs). Provide an approximate schedule of the work programme using a Gantt chart (one full A4 page format to ensure legibility), indicating the beginning and end of each WP and including the most important milestones.*

## WP *X*:Management and coordination

*Limit: 2 pages (including any illustrations)*

|  |  |
| --- | --- |
| Name |  |
| Duration | *M1*–*Mxx (e.g., M1*–*M96)* |
| WP Leader | *List short name (from Table 1‑2 and Table 1‑3)* |
| Members and collab. partners | *List short names (from Table 1‑2 and Table 1‑3)* |

**Budget:** *State the funding sources. Note the share of the core budget in Table 3-3 of the Call Guideline.*

|  |  |  |  |
| --- | --- | --- | --- |
| Total | SWEET funding | Own contributions | Third-party contributions |
| CHF | CHF | % of total | CHF | % of total | CHF | % of total |
|  |  |  |  |  |  |  |

**Objectives:** *State specific, measurable, and achievable objectives. Explain the link(s) between the WP objectives and the consortium objectives in Section 3.2 and expected outcomes in Section 3.1.*

|  |  |  |
| --- | --- | --- |
| No. | Statement of WP objective | Link(s) between WP objective and the consortium objectives and expected outcomes |
|  |  |  |
|  |  |  |

**Approach:** *Describe the approach that will be used to attain the objectives, the contributions from the members and collaboration partners, and the outputs (if any). Expand on your descriptions in Section 5.2. Describe the interrelationships of the WP with the rest of the portfolio, using an illustration if appropriate. Make sure any illustrations are large enough to be legible.*

## WP *X*: Integration

*Limit: 2 pages (including any illustrations)*

|  |  |
| --- | --- |
| Name |  |
| Duration | *M1*–*Mxx (e.g., M1*–*M96)* |
| WP Leader | *List short name (from Table 1‑2 and Table 1‑3)* |
| Members and collab. partners | *List short names (from Table 1‑2 and Table 1‑3)* |

**Budget:** *State the funding sources. Note the share of the core budget in Table 3-3 of the Call Guideline.*

|  |  |  |  |
| --- | --- | --- | --- |
| Total | SWEET funding | Own contributions | Third-party contributions |
| CHF | CHF | % of total | CHF | % of total | CHF | % of total |
|  |  |  |  |  |  |  |

**Objectives:** *State specific, measurable, and achievable objectives. Explain the link(s) between the WP objectives and the consortium objectives in Section 3.2 and expected outcomes in Section 3.1.*

|  |  |  |
| --- | --- | --- |
| No. | Statement of WP objective | Link(s) between WP objective and the consortium objectives and expected outcomes |
|  |  |  |
|  |  |  |

**Approach:** *Describe the approach that will be used to attain the objectives, the contributions from the members and collaboration partners, and the outputs (if any). Expand on your descriptions in Section 5.3. Describe the interrelationships of the WP with the rest of the portfolio, using an illustration if appropriate. Make sure any illustrations are large enough to be legible.*

## WP *X*:Knowledge and technology transfer

*Limit: 2 pages (including any illustrations)*

|  |  |
| --- | --- |
| Name |  |
| Duration | *M1*–*Mxx (e.g., M1*–*M96)* |
| WP Leader | *List short name (from Table 1‑2 and Table 1‑3)* |
| Members and collab. partners | *List short names (from Table 1‑2 and Table 1‑3)* |

**Budget:** *State the funding sources. Note the share of the core budget in Table 3-3 of the Call Guideline.*

|  |  |  |  |
| --- | --- | --- | --- |
| Total | SWEET funding | Own contributions | Third-party contributions |
| CHF | CHF | % of total | CHF | % of total | CHF | % of total |
|  |  |  |  |  |  |  |

**Objectives:** *State specific, measurable, and achievable objectives. Explain the link(s) between the WP objectives and the consortium objectives in Section 3.2 and expected outcomes in Section 3.1.*

|  |  |  |
| --- | --- | --- |
| No. | Statement of WP objective | Link(s) between WP objective and the consortium objectives and expected outcomes |
|  |  |  |
|  |  |  |

**Approach:** *Describe the approach that will be used to attain the objectives, the contributions from the members and collaboration partners, and the outputs (if any). Expand on your descriptions in Section 5.4. Describe the interrelationships of the WP with the rest of the portfolio, using an illustration if appropriate. Make sure any illustrations are large enough to be legible.*

## Research projects starting within the first three years

*Limit: 2 pages per WP (including any illustrations), with each WP starting on a new page.*

### WP *X*

|  |  |
| --- | --- |
| Name |  |
| Duration | *Mxx*–*Mxx (e.g., M1*–*M48)* | TRL range (if applicable) | *X* – *X*  |
| WP Leader | *List short name (from Table 1‑2 and Table 1‑3)* |
| Members and collab. partners | *List short names (from Table 1‑2 and Table 1‑3)* |

**Budget:** *State the funding sources. Note the maximum funding levels in Table 3-3 of the Call Guideline.*

|  |  |  |  |
| --- | --- | --- | --- |
| Total | SWEET funding | Own contributions | Third-party contributions |
| CHF | CHF | % of total | CHF | % of total | CHF | % of total |
|  |  |  |  |  |  |  |

**Objectives:** *State specific, measurable, and achievable objectives. Explain the link(s) between the WP objectives and the consortium objectives in Section 3.2 and expected outcomes in Section 3.1.*

|  |  |  |
| --- | --- | --- |
| No. | Statement of WP objective | Link(s) between WP objective and the consortium objectives and expected outcomes |
|  |  |  |
|  |  |  |

**Approach:** *Describe the approach that will be used to attain the objectives, the contributions from the members and collaboration partners, and the outputs. Describe the inter-/transdisciplinarity of your approach, using an illustration if appropriate. Describe the interrelationships of the WP with the rest of the portfolio, using an illustration if appropriate. Make sure any illustrations are large enough to be legible. Relate your approach to the state of the art and explain how your work will advance the state of the art.*

## Research projects starting after the first three years

*Limit: 2 pages for each WP (including any illustrations), with each WP starting on a new page*

### WP *X*

|  |  |
| --- | --- |
| Name |  |
| Duration | *Mxx*–*Mxx (e.g., M1*–*M48)* | TRL range (if applicable) | *X* – *X*  |
| WP Leader | *List short name (from Table 1‑2 and Table 1‑3)* |
| Members and collab. partners | *List short names (from Table 1‑2 and Table 1‑3)* |

**Budget:** *State the funding sources. Note the maximum funding levels in Table 3-3 of the Call Guideline.*

|  |  |  |  |
| --- | --- | --- | --- |
| Total | SWEET funding | Own contributions | Third-party contributions |
| CHF | CHF | % of total | CHF | % of total | CHF | % of total |
|  |  |  |  |  |  |  |

**Objectives:** *State specific, measurable, and achievable objectives. Explain the relationship(s) between the WP objectives and the consortium objectives in Section 3.2 and expected outcomes in Section 3.1.*

|  |  |  |
| --- | --- | --- |
| No. | Statement of WP objective | Relationship(s) between WP objective and the consortium objectives and expected outcomes |
|  |  |  |
|  |  |  |

**Approach:** *Describe the approach that will be used to attain the objectives, the contributions from the members and collaboration partners, and the outputs. Describe the inter-/transdisciplinarity of your approach, using an illustration if appropriate. Describe the interrelationships of the WP with the rest of the portfolio, using an illustration if appropriate. Make sure any illustrations are large enough to be legible. Relate your approach to the state of the art and explain how your work will advance the state of the art.*

## P+D projects starting within the first three years

*Limit: 2 pages for each WP (including any illustrations), with each WP starting on a new page*

*Note that P+D projects are treated somewhat differently from other projects in SWEET project portfolios. In particular, pay close attention to Section 3.4.3 and Figure 3-3 in the Call Guideline.*

### WP *X* (P+D)

|  |  |
| --- | --- |
| Name |  |
| Duration | *Mxx*–*Mxx (e.g., M1*–*M48)* | TRL range (if applicable) | *X* – *X*  |
| WP Leader | *List short name (from Table 1‑2 and Table 1‑3)* |
| Members and collab. partners | *List short names (from Table 1‑2 and Table 1‑3)* |

**Budget:** *State the requested funding. Note the maximum funding level in Table 3-3 of the Call Guideline.*

|  |  |
| --- | --- |
| Total | P+D funding (non-amortisable cost) |
| CHF | CHF | % of total |
|  |  |  |

**Objectives:** *State specific, measurable, and achievable objectives. Explain the relationship(s) between the WP objectives and the consortium objectives in Section 3.2 and expected outcomes in Section 3.1.*

|  |  |  |
| --- | --- | --- |
| No. | Statement of WP objective | Relationship(s) between WP objective and the consortium objectives and expected outcomes |
|  |  |  |
|  |  |  |

**Approach:** *Describe the approach that will be used to attain the objectives, the contributions from the members and collaboration partners, and the outputs. Describe the inter-/transdisciplinarity of your approach, using an illustration if appropriate. Describe the interrelationships of the WP with the rest of the portfolio, using an illustration if appropriate. Make sure any illustrations are large enough to be legible. Relate your approach to the state of the art and explain how your work will advance the state of the art. Explain why there is a need for the P+D project, e.g., a need for practical tests of a technology/solution/process and what new insights are expected from the practical tests. Describe why this technology/solution/process, to be tested in the project at a smaller scale, has a strategic relevance for the Swiss energy system and elaborate on its future application potential (i.e., energetic impact, economic viability, market implementation).*

#

# Sources of federal financial assistance

*Limit: none*

*Member entities that seek financial assistance simultaneously from several federal instruments must clearly disclose all sources of financing and inform all concerned authorities (in accordance with Article 12 of the Federal Subsidy Act, see Section 3.4.4. of the Call Guideline).*

Table 8‑1: Sources of federal assistance

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Member entity(ies) | Name of the project | Brief description of the project | Start *–* end date | Funding instrument and project no. | Total budget [kCHF] | Federal financial assistance [kCHF] | Funding for the SWEET consortium [kCHF] | Concerned WPs no. in the portfolio |
| *Short name(s)* |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

# References

*Limit: none*

*The reference section must not include any endnotes or any other content. There is no preferred format for individual references, but you should follow a consistent format.*

# Self-declarations

1. The coordinator declares to have the explicit consent of all members and collaboration partners on their participation and on the content of this proposal.

**Please choose**

1. The coordinator declares to have the explicit consent of all members and collaboration partners to the use of this proposal and related information for the purpose of the further development of the SWEET programme.

**Please choose**

1. The coordinator declares to have the explicit consent of all members and collaboration partners to be contacted by the Swiss Federal Office of Energy.

**Please choose**

1. The information contained in this proposal is correct and complete.

**Please choose**

1. This proposal complies with ethical principles, including the highest standards of research integrity[[10]](#footnote-10) and including, in particular, avoiding fabrication, falsification, plagiarism or other research misconduct. The proposal is also in accordance with applicable law.

**Please choose**

1. The coordinator declares that each member has confirmed: (a) they are fully eligible in accordance with the criteria set out in the Call Guideline; (b) they have the financial and operational capacity to carry out the proposed action.

**Please choose**

1. The coordinator declares that: (a) the work packages associated with research projects, management and coordination, integration, and KTT are fully funded by the SWEET core budget, own contributions, and third-party contributions, and (b) these work packages are independent of outputs of unfunded activities.

**Please choose**

1. The coordinator declares that each member has confirmed that: (a) all federal financial assistance already granted and any applied for to fund the work packages associated with research projects, management and coordination, integration, and KTT, or parts thereof is declared in the application; (b) the own contributions and third-party contributions declared in the application to cover project funding do not contain any federal financial assistance; (c) there is no inadmissible cumulation of federal financial assistance; and (d) a detailed breakdown of the project costs is available and can be provided if requested upon award and contracting.

**Please choose**

# Signature

This application must be signed by the coordinator on behalf of all members and collaboration partners.

Members and collaboration partners agree to the publication of results obtained by the consortium. In particular, scientific/technical project reports (interim and final reports) and the main project information will be published on the [ARAMIS](https://www.aramis.admin.ch/) information platform and, if deemed beneficial, on the [geoportal](http://map.geo.admin.ch/) of the Confederation.

|  |
| --- |
| **Host institution:** |
| Click here to enter text. |
| **Place, date:** |  | **Name of the coordinator:**  |  | **Signature:** |
|  |  |  |  |  |

# Appendix A: Preliminary life-cycle analyses

*For each of the processes to be investigated or developed in the work programme, results from a preliminary life-cycle analysis (LCA) must be supplied in the table below. “Preliminary LCA” in this case includes simple estimates for primary energy use and the greenhouse-gas emissions (GHGE) and, if already available, the impacts according to the Ecological Scarcity Method. The appendix may not be used to provide information that could not be fit into the page-limited sections of the pre-proposal.*

*Limit: 1 page per table (process), with each table starting on a new page*

|  |  |  |  |
| --- | --- | --- | --- |
| Process | *Name the process* | WP no**.** |  |
| Reference(s) | *If a detailed LCA has already been carried out, list the relevant reference(s) here.* |
| Assumptions | *Summarize the key assumptions underlying the LCA (e.g., lifetime, process efficiencies, etc.).* |
| Estimated primary energy use | *If a detailed LCA has already been carried out, state the estimated primary energy use per kWh of fuel burned.* *If a detailed LCA has not been carried out yet, outline your estimate of the primary energy use.*  |
| Estimated GHGE | *If a detailed LCA has already been carried out, state the estimated GHGE in t CO2eq per kWh of fuel burned.* *If a detailed LCA has not been carried out yet, outline your estimate of the GHGE in t CO2eq.*  |
| Ecological Scarcity Score (optional) | *If a detailed LCA has already been carried out and the Ecological Scarcity Score has been determined, state the impact in UBP (Umweltbelastungspunkte) per kWh of fuel burned.*  |

1. *See prebudget* [↑](#footnote-ref-1)
2. *Types of organisations: institution of higher education (university; institute of the ETH domain; university of applied sciences); non-commercial research organization; private for-profit institution; professional association; enterprise associated with the Swiss confederation; public sector (such as canton, city, commune, district/region); non-governmental organisation (NGO); citizen association; cooperative.*  [↑](#footnote-ref-2)
3. *The inclusion of foreign institutions of higher education, foreign non-commercial research organisations and foreign private for-profit institutions must be justified in the notification of intent to submit a pre-proposal (see Call Guideline, Sections 3.2.2 and 4.1, and Table 3-1) and is subject to approval by the SFOE.*  [↑](#footnote-ref-3)
4. See footnote 2. [↑](#footnote-ref-4)
5. The term “outcome” is used here in the context of the five-stage impact model, which distinguishes between inputs, activities, outputs, outcomes, and impacts. In the SWEET programme, the five stages are interpreted as follows: “inputs” are the SWEET calls and the associated funding; “activities” are the research, innovation, and KTT activities of SWEET consortia; “outputs” are the immediate results of the activities; “outcomes” are the effects of the outputs on a consortium’s stakeholders; and “impacts” are the effects of the outcomes on whether and when the targets of Energy Strategy 2050 and the long-term climate strategy are achieved. [↑](#footnote-ref-5)
6. *See footnote 2.* [↑](#footnote-ref-6)
7. *See footnote 2.*  [↑](#footnote-ref-7)
8. If the coordinator is also a WP leader, only count the coordinator role, not both. [↑](#footnote-ref-8)
9. *Inspiration can be taken from Graph 3 in M. A. Max-Neef, Foundations of transdisciplinarity, Ecological Economics, 53:5-16, 2005 and Fig. 13.1 in D. Spreng et al. (eds.), Tackling Long-Term Global Energy Problems: Contributions of Social Science, Springer, 2012.* [↑](#footnote-ref-9)
10. See for instance**:** <http://www.snf.ch/en/theSNSF/research-policies/scientific-integrity/Pages/default.aspx> [↑](#footnote-ref-10)