



EFCA
YOUNG PROFESSIONAL OF THE YEAR
2018

Personal details / Entry Form

Full name: Stanislas Merlet

Nationality: French

Birthday: July 2, 1986

Age as of 31/03/2018: 31 y.o.

Company: Multiconsult Norge AS (Norway)

Location: Oslo

Member Association: Rådgivende Ingeniørers Forening (RIF) / Association of Consulting Engineers, Norway

Contact details

E-mail address: stanislas.merlet@multiconsult.no

Office phone number: +47 911 31 493

Cell phone number Enter at least one: +47 911 31 493

Instructions for completing this form



Note to candidates

Each section and sub-section may be expanded as required. The completed entry form should be no longer than **16 pages in total**. Section A is to be completed by your employer, and Section C by the client.

All entries should be submitted in English. Any annexes in other languages should be accompanied by an English translation, or will not be taken into account.

The form should be returned to your national association. They will forward it to the EFCA Secretariat.

You will be informed of the results of the competition at end of April 2018.

Good luck!

For those participating in the FIDIC YP competition

The requirements stipulated in the respective EFCA and FIDIC YP competitions coincide largely for 75%. The following three FIDIC competition requirements are entirely covered in the EFCA application:

- Technical achievements (see Section B in this template) (50%)
What is 30% for EFCA
- Leadership achievements (see Section C in this template) (15%)
What is 40% for EFCA
- Social and community contributions (see Section B in this template) (10%)
What is 30% for EFCA

However, EFCA YPs interested in submitting an application for the FIDIC YP competition should complement their EFCA application with the following two extra requirements.

Applicants should demonstrate:

- Contributions to consulting engineering industry (15%)
- Contribution to consulting engineering associations (10%)

Section A. EMPLOYER'S RECOMMENDATION

Introduction

Stanislas Merlet is a French citizen and holds a Master degree in Renewable Energy from France and Spain. Prior to moving to Norway, he worked with project development and construction of solar power plants in France. His background and experience have been very useful in building a solar energy market in Norway. Until recently, solar systems technology have not been taught at any significant degree at Norwegian universities and colleges, but Stanislas has assisted with his competence as a supervisor of several master's degrees at, among others, Norwegian University of Life Science's (NMBU) and Norwegian University of Science and Technology (NTNU). Stanislas has also organized and completed courses in system simulation through the Norwegian Solar Energy Association (where he is also Board Member). Stanislas is also a widely used lecturer in several arenas and he has published a poster at the world's largest solar cell conference EUPVSEC.

Stanislas' both broad and profound expertise helps to raise the level of knowledge in the Norwegian solar energy market up to an internationally competitive level. It is expressed both through international publications, but also through Multiconsult's missions in Africa and Asia. Stanislas has, among other things, been key in the preparation of offers that have been won in strong competition with companies from countries that we normally consider the best in solar energy knowledge. He has further contributed to the projects being carried out in an exemplary manner. Stanislas is undoubtedly a very important factor in Multiconsult's ability to establish itself as a serious player in the international solar energy market. At the same time, he has been a key player in the realization of complex solar energy projects in Norway, such as Powerhouse Brattørkaia, ASKO Vestby, and others.

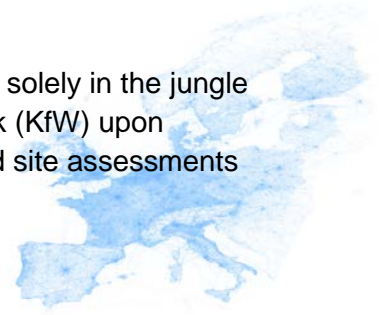
Stanislas has been awarded the prize "Young Consultant of the Year" by the Norwegian Association of Consulting Engineers (RIF) in 2017, for his impressive competence in implementing renewable energy within a relatively new field in Norway: solar power. It was the 16th time RIF awarded the prize, to one of the 11 000 consulting engineers in members companies.

Curious and Innovative

In the solar industry, where technology is continuously improved and developed and where new products arise constantly, Stanislas ensures that he is up to date on the latest happening while helping to lift new issues. Among other things, he has good contact with the developer of one of the most important simulation tools in the industry (PVsyst) and has repeatedly helped identifying defects and shortcomings with the software and, not least, finding solutions. Stanislas shows his broad curiosity by constantly identifying and solving problems within the subject, but also in his approach to foreign cultures. To succeed with complex projects in Africa and Asia, for example, cultural understanding is central and through its curious being, Stanislas has a unique ability to get in touch with the people he works with so that he better understands the customer's challenges.

Stanislas has participated in several missions in Engineers Without Borders Norway, both voluntarily and through Multiconsult and he has been a project leader with limited support in

Africa and Asia on major complex projects. For example, he has traveled solely in the jungle of Cameroon, has been representative of the German Development Bank (KfW) upon acquisition of two major solar power plants in Uganda and has conducted site assessments for solar power plants in Bangladesh.



Improves the Discipline

Stanislas constantly explores new applications for solar energy and new business models that create value for Multiconsult and the customer. Among other things, he has helped to elevate the quality level of control and testing of solar systems in Norway to a high level.

Stanislas helps to lift the subject both by bringing new competences to Norway, but also by acquiring new knowledge from international journals and contacting its broad international contact network. Stanislas is also able to see opportunities for utilization of new products and technologies, and he is often exploring these opportunities through active projects. He is also good at sharing the knowledge internally, and helps sharing the knowledge in the Norwegian academic community.

Internally, Stanislas has been central to build the quality assurance system for solar energy as a new subject. This he has done through the preparation of procedures and checklists for the execution of assignments and these tools have been very important in building a new professional environment in a brand new market where the lack of expertise is high.

The lack of Norwegian expertise in solar energy is expressed, among other things, due to the lack of Norwegian standards. Stanislas has contributed with inputs to both the NS 3031 "Calculation of energy performance of buildings" and NEK 400-7-712 "Power supply with solar PV systems", through Multiconsult's representatives and by proofreading of the draft new standards.

Communicative and Sharing

Stanislas works actively throughout the range of Multiconsult's projects, from technically complex building-integrated projects and off-grid projects to large-scale solar power projects in developing countries. The complexity of these projects varies between understanding the customer's needs and technical challenges to communicating with investors and public authorities in a different language and with other cultures. Stanislas is capable of identifying the challenges of the various projects.

He has also shown a particularly good ability to communicate with clients and stakeholders in our international projects. Good communication skills are particularly important in these projects, as we work in countries with a different form of bureaucracy than we know from Norway.

Stanislas is often used as a lecturer as he is able to convey complex problems in a simple and educational way. Stanislas has also been interviewed on several occasions as a specialist in Norwegian media such as Teknisk Ukeblad. He has also written academic posts to the blog Energi Klima.no and the technology field in Dagens Næringsliv.

Practical and Commercial Application of Knowledge

Stanislas has shown through several projects that he is not only theoretically skilled but also that he can contribute to the practical implementation of work. This is especially true for Engineers Without Borders Norway, where he has contributed to practical implementation with little resources available. He is as comfortable with a screwdriver in hand as a PC on the table. An example of this is when he advised UNDP in implementing solar PV systems on their offices worldwide and then traveled to Sierra Leone to assess / improve a solar system UNDP had installed during the Ebola crisis.

Stanislas is also able to identify and sell new projects where he also translates fresh knowledge into practical implementation. This is very important in an industry that is under constant development.

Contribution to the Visibility of the Consulting Engineer's Industry

Stanislas delivers projects that are only possible for a person with good business support and he creates opportunities and new partnerships through the projects he is involved in. Stanislas has a strong role in the work done in the Norwegian Solar Energy Cluster in which he has participated actively since the very beginning. In addition, he is in the board of the Norwegian Solar Energy Association, where he also contributes to a more mature solar energy industry.

Stanislas has organized Multiconsult's participation on several stands, either at the ZERO conference in Oslo or at Intersolar in Munich, Germany.

Development Curve

Despite being only 31, Stanislas has shown his own ability to grow with the projects he undertakes. He has shown a special ability to carry out the projects with high quality and on time. He likes challenges and hence has gained greater responsibility and has shown that he manages to conduct professionally challenging missions. He has shown a big progress in the time he has been employed by Multiconsult and today he acts as a senior advisor.

Since the solar energy industry is relatively new in Norway and at the same time in constant development, professional updates must be found internationally. Here, Stanislas' initiative shows how to acquire knowledge beyond the borders of the country where necessary. At the same time, he is capable of acquiring knowledge from Norwegian academic environments where they are strong. He has good contact with different Norwegian R&D institutions in solar energy like the FME center "Solar United", IFE, NTNU, UiO and Sintef. Furthermore, Stanislas has contributed actively (among others with publications) in the FME centers ZEB (Zero Emission Buildings) and ZEN (Zero Emission Neighborhoods).

Personality

Stanislas combines professional skills, language skills (he speaks Norwegian, French, Spanish, English and a little German) and cultural understanding so that he has a special ability to understand his customers, other subjects and third parties involved in his projects, regardless of in which country he operates. He also cares with the people around him and he goes a long way for people to work well and for colleagues to succeed in their projects.

Stanislas also has the ability to quickly integrate into new technologies and methods and to contribute to spreading this knowledge into the academic community around him.

Stanislas represents the entire Multiconsult and has a good understanding of what it means to be a Consulting Engineer. He also sees opportunities for subjects other than his own, thus contributing to opportunities for more than himself.

Name: Klas Ljungberg

Job title: Head of Solar and Smart Grids

Managerial relationship to candidate: His supervisor

Section B. THE PROJECT

B.1 Project description:

Overview of the project, including description of the product/service, client, project partners, timing, specific challenges etc. Supporting documents (which may include photos, drawings or publications) may be included.



In November 2015, Multiconsult delivered to the Norwegian Polar Institute a feasibility study for the integration of a solar powered fuel saver at the Troll station, Antarctica.

Troll is the Norwegian research station in Antarctica. The station is built on rock 1,270 meters above sea level and 235 km from the coastline (coordinates 72°01' S, 2°32' E).



Figure 1: Troll station, Antarctica. Source: NPI.

The Norwegian Polar Institute (NPI) operates the station all-year round. The energy supply is currently based on diesel generators with heat recovery from exhaust gas and cooling water. In addition to the station's own use, the energy system also delivers electricity for the operation of an antenna system.

The ambition of NPI is to replace most of the current energy production with renewable energy. Measurements have shown that wind will not be a suitable alternative source of energy (wind gusts of up to 60 m/s). However, the station's high latitude, in combination with a dry and stable inland climate with good solar irradiation make solar PV an attractive energy source.

The purpose of the work was to pre-design a functional "fuel saver" PV system (with electricity storage), i.e. to increase the station's energy autonomy and reduce the need for fuel logistics. The station's location makes diesel supply highly demanding in terms of logistics as well as extremely expensive.

Multiconsult delivered a feasibility study to NPI in November 2015 that included the evaluation of the existing system (efficiency, generation, consumption and load profiles) and the design and simulation of two cases for implementation of solar energy:

- Case 1: integration of the highest solar PV power (without storage) limited to optimal operation of the diesel generators.
- Case 2: optimized energy system combining solar PV, electricity storage and diesel generators maximizing fuel saving.

In addition, NPI implemented a 7.32 kWp pilot project late 2015 in order to collect data during the southern winter 2016.



Figure 2: Pilot project, Troll station. Source: NPI.

B.2 Innovative characteristics of the project:

Characterization of PV systems in Polar Regions is dependent on several characteristics of the location such as high albedo, low temperatures, snow cover on the modules and seasonal variations of solar resources. Most of the state of the art simulation programs experience limitations while operating in these latitudes. Extremely high wind gusts (up to 60 m/s in Troll station) that can carry small rocks, sand and ice particles make the design of the mounting system crucial for both roof mounted and ground mounted panels. The match between PV generation, storage size and load profiles is made challenging by the high seasonal variations of solar resources.

B.3 The YP's role in, and specific contribution to, the project:

The YP carried out the assessment, design and simulation of the solar PV system, included storage. He also created the tender documents - and conducted the evaluation of proposals - for the pilot project that has been implemented late 2015 at the Troll station (and is still in operation today).

B.4 Communication with the client/end user:

The judges will positively evaluate evidence of good communication skills which contributed towards selling the project to the client.

In addition to the technical assessments and different presentations/discussions with the Client during the assignment, the YP also presented the project in June 2016 at the world's largest solar cell conference EUPVSEC in Munich, Germany.

B.5 Describe the project end results and the benefits to the client/end user:

Low temperatures in combination with high albedo and favorable solar resources result in a high specific yield of more than 1,100 kWh/kWp, particularly when one considers the latitude. This enables a combination of solar power (app. 762.5 kWp) and electricity storage (app. 3,840 kWh) to cover more than 50% of the annual energy consumption at Troll Station. Even though the investment costs of such a system will be very high (approximately 76.25 million NOK at 2015 level), it can also represent significant fuel savings (app. 12.50 million NOK per year). The estimated levelized cost of electricity of the renewable energy system is 7.40 NOK/kWh, which corresponds to approximately half of the current energy cost for diesel generation (15 NOK/kWh). In addition to making Troll Station cleaner and greener, solar power is also highly competitive and profitable.

More than two years of operation of the pilot project has confirmed the viability of solar power at the station's location, as well as the resistance to this harsh environment. NPI is currently looking for financial solutions and partners to consider the full-scale project.

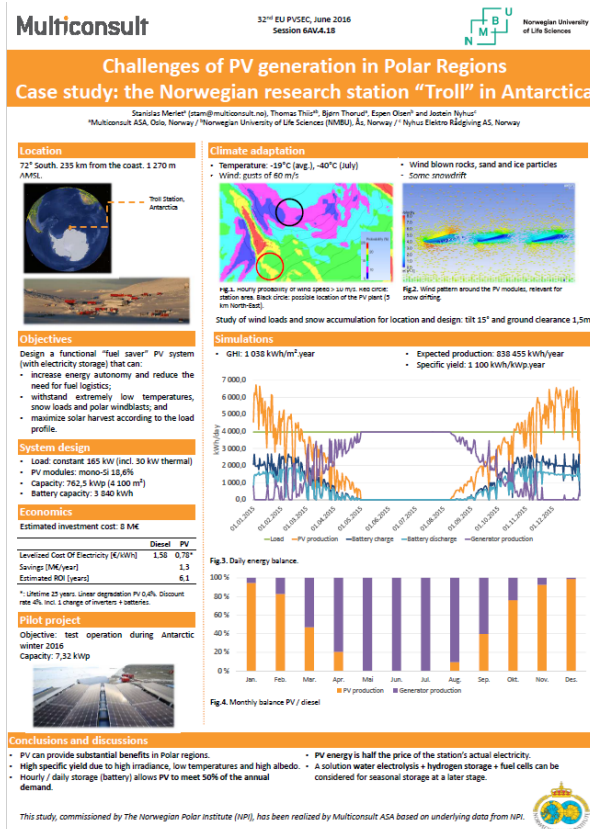


Figure 3: Poster 32nd EUPVSEC. Source: Multiconsult.

Section C. CLIENT'S APPRECIATION OF THE CANDIDATE

Describe your working relationship with the candidate during the project, and evaluate their performance, including their communication skills.



The candidate performed technically, in time, and with good communication:

Project meetings with clear explanations and recommendations

Communication skills in both Norwegian and English

Presentation of the project and representation of NPI at the world's largest solar cell conference EUPVSEC in Munich, Germany

English technical summary of the study for international competence sharing

John E Guldahl (signature)

Job title: Director Operations and Logistics

Company: Norwegian Polar Institute

Section D. CV OF THE CANDIDATE



Curriculum Vitae



Personal information

First name(s) / Family name(s) **Stanislas MERLET**
Business Address Multiconsult Norge AS, Nedre Skøyen vei 2, 0276 Oslo, Norway
Phone number(s) Cell: +47 91 13 14 93
E-mail address stanislas.merlet@multiconsult.no
Nationality French
Date of birth July 2, 1986

Work experience

Dates	2013 - ongoing
Occupation or position held	Solar Energy Consultant
Main activities and responsibilities	<ul style="list-style-type: none">- Technical advisory services in Solar PV: feasibility studies, design and detailed engineering, due diligences, assistance in procurement, tender documents, construction supervision, commissioning. Both off-grid and grid connected, from commercial buildings to utility-scale plants, in Norway and international (projects in Poland, Turkey, Paraguay, Cameroon, Tanzania, Uganda, Zanzibar, Sierra Leone, Botswana, Ethiopia, Zambia, Bangladesh, Kyrgyzstan and Antarctica).- PV business development in Norway.- Lectures / courses: introduction to PV, markets, drivers, technology and simulation (PVsyst expert). <p>Awarded the prize "Young Consultant of the Year" by the Norwegian Association of Consulting Engineers (RIF) in 2017, for his impressive competence in implementing renewable energy within a relatively new field in Norway: solar power. It was the 16th time RIF awarded the prize, to one of the 11 000 consulting engineers in members companies.</p>
Name and address of employer	Multiconsult, Oslo, Norway
Type of business or sector	Renewable Energy
Dates	2011 - 2013
Occupation or position held	Project Coordinator
Main activities and responsibilities	<ul style="list-style-type: none">- Managed high-level scientific cooperation projects between France and Norway (Energy, Chemistry, Biology, Medicine, etc.), involving the Embassy of France in Norway, the Research Council of Norway, the French-Norwegian Foundation, the French National Center for Scientific Research (CNRS), SINTEF, the French Polar Institute Paul-Emile Victor, and other Norwegian and French Universities and Research Centers.- Organized bi-national scientific conferences and seminars.- Carried out technology and innovation forecasting in Norway for ADIT (French agency for the diffusion of technological information).
Name and address of employer	Embassy of France in Norway, Department for Scientific Cooperation, Oslo, Norway
Type of business or sector	Science Diplomacy/Cooperation



Dates 2010 - 2011
Occupation or position held Project Manager
Main activities and responsibilities Photovoltaic subsidiary of the group VOL-V, independent producer of renewable electricity.
- Developed and managed incoming business.
- Carried out technical and economic feasibility studies.
- Managed large projects (ex: 7,5 MWp BiPV).
- Studied new opportunities (photovoltaic shade structures for car parks).
Name and address of employer Vol-V Solar, Montpellier, France
Type of business or sector Renewable Energy

Dates 2008
Occupation or position held Project Manager
Main activities and responsibilities Energy subsidiary of the group Eiffage. Supplier and installer of solar heating and photovoltaic systems.
- Commercial visits for prospective buyers (private individuals and farmers).
- Carried out technical and economic feasibility studies.
- Responded to public calls for tender.
- Handled stock and supply.
Name and address of employer Forclum, Renewable Energy Department, Tours, France
Type of business or sector Renewable Energy

Education and training

Dates 2009 - 2010
Title of qualification awarded Master
Principal subjects/occupational skills covered Renewable Energy and Energy Resources
Name and type of organisation providing education and training University Rey Juan Carlos, Madrid, Spain
Level in national or international classification Master 2

Dates 2008 - 2009
Title of qualification awarded Master
Principal subjects/occupational skills covered Energy Systems and Renewable Energy
Name and type of organisation providing education and training University of Corsica, France
Level in national or international classification Master 1

Dates 2007 - 2008
Title of qualification awarded French Licence Professionnelle (Bachelor)
Principal subjects/occupational skills covered Renewable Energy
Name and type of organisation providing education and training University of Poitiers, France
Level in national or international classification Bachelor 3



Dates 2005 - 2007
 Title of qualification awarded French Diplome Universitaire de Technologie (Bachelor)
 Principal subjects/occupational skills covered Power Engineering, Electricity, Electronics and IT
 Name and type of organisation providing education and training University of Angers, France
 Level in national or international classification Bachelor 2

Personal skills and competences

Mother tongue(s) **French**

Other language(s)

Self-assessment

European level ()*

English

Norwegian

Spanish

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
C1	C1	C1	C1	C1	C1
C1	C1	C1	C1	C1	C1
B2	B2	B1	B1	B1	B1

Social skills and competences Multi-linguist, diplomacy, cultural understanding, team management

Technical skills and competences Solar Energy

Computer skills and competences PVsyst (simulation PV systems), PolySun (simulation energy systems)

Other skills and competences Dynamic and curious

Hobbies and activities Traveling, freeskiing, trail running, kayaking

Papers published

2016: Challenges of PV Generation in Polar Regions. Case Study: The Norwegian Research Station "Troll" in Antarctica
 32nd European Photovoltaic Solar Energy Conference and Exhibition, PVSEC 2016, Munich, Germany
 Other authors: Bjørn Thorud, Multiconsult; Thomas Thiis, Multiconsult / NMBU; Espen Olsen, NMBU.

2016: Zero Village Bergen: Mismatch Between Aggregated PV Generation and Electric Load in a New Zero Emissions Neighbourhood in Nordic Climate
 12th REHVA World Congress, CLIMA 2016, Ålborg, Denmark
 Other authors: Igor Sartori, SINTEF Byggeforsk; Karen Byskov Lindberg, NTNU.

2015: What does solar energy revolution mean? Solar energy in Norway: Status and prospects
 Norsk Klimastiftelse
 Other authors: Bjørn Thorud, Multiconsult.

2014: Distribution Grid Photovoltaic Systems in a Norwegian Context
 4th International Workshop on Integration of Solar Power into Power Systems, Berlin, Germany
 Other authors: Christian Granum, Hafslund Nett; Ole-Morten Midtgård, NTNU.

Public speaking experience

Course holder for professionals: solar energy and simulation of solar PV systems
Several lectures/conferences: 32nd EUPVSEC, ZEB annual conference, 12th REHVA World Congress, Norwegian Solar Energy Cluster, Smart Energy annual Conference, etc.
Workshop animations

Membership of professional organisations

2014 - present: Ren-PEACE (renewable energy action for lasting peace)
2013 - present: Engineers Without Borders Norway (IUG - Ingeniører Uten Grenser)
2013 - present: Norwegian Solar Energy Association (Norsk Solenergiforening) – Elected Board Member 2015 - 2017 and 2017 - 2019

