

## **Mitacs Accelerate Proposal**

## INSTRUCTIONS

- Please make sure you are using the latest version of this form posted on www.mitacs.ca/en/programs/accelerate/apply-now. This link also provides an Accelerate Guide with detailed information on how to write your proposal.
- Please do not modify, remove text or instructions in each section/subsection or reformat this form in any way. A modified form will result in a delay in the internship evaluation process.
- Send your draft proposal to your <u>Mitacs Business Development Representative</u> prior to obtaining all signatures and submitting.
- The proposal should be written and submitted at least eight (8) weeks prior to the planned start date of the internship. For international travel, a minimum 16 weeks lead time is required.
- The start date of the internship has to be after research approval and the receipt of the partner funds at Mitacs.
- Partner funds can be sent directly to Mitacs in Canadian dollars prior to approval to expedite the process.
- If applicable, proposals with a not-for-profit partner must seek partner and project eligibility approval before
  proceeding. Please contact a <u>Mitacs Business Development Representative</u> to discuss the eligibility of an NFP
  organization **BEFORE** submitting your application (see section 2.7).
- If applicable, academic supervisor conflict of interest documentation must be submitted with your application (see section 4.1.1 for details). For more information, see Mitacs' Conflict of Interest policy: <a href="http://www.mitacs.ca/en/conflict-interest-policy">http://www.mitacs.ca/en/conflict-interest-policy</a>. If applicable, intern conflict of interest declarations must be received by Mitacs before submitting your application (see section 4.3.2).
- If you cannot see the items listed in the drop downs, please refer to Appendix C: Options and type the corresponding answer in the space provided.

Please note: If required, your Mitacs Business Development Representative can assist you with:

- Identifying your Office of Research Services (ORS) or equivalent representative.
- Assessing the eligibility and completeness of the proposed research.

## **APPLICATION CHECKLIST**

#### A complete internship application package must include the following:

- The proposal **completed and signed** by all parties in Word form
  - The Mitacs Accelerate Memorandum (Section 7) with signatures must be submitted as a scanned PDF
  - Appendix A Accelerate Intern Consent Form signed
- Intern(s) CV (Any format is allowed. A <u>CV template</u> is available on the Mitacs website)
- Lead Academic Supervisor's CV only for projects with 6+ IUs (CCV as per Tri-Council or other CV format)
- Accelerate budget and invoicing schedule (excel spreadsheet)
- Any supplementary documents (as applicable)

#### If your application involves an Accelerate International component please note:

- You must complete Appendix B Accelerate International in addition to this entire application
- International Pre-Departure Form and Code of Conduct and Ethics form may be forwarded to Mitacs after submission of your application; however, funds cannot be released and internship may not begin until Mitacs receives these forms
- Indemnity Agreement (as applicable) \*Please contact your Business Development representative to find out whether this document is required.
- Visit the <u>Accelerate International website</u> to determine if there is any additional required documentation for the country you intend to work with
- \* An incomplete application or a modified form will result in a delay in the internship evaluation process.

## **Mitacs Accelerate Proposal**

## 1. Research Proposal Summary

1.1.	Title of project:	Kisik clean energy solar photovoltaic power with Sayisi Dene First Nation						
1.2.	Type of project:	(X) Accelerate						
	Please indicate (x)	(_) Accelerate Fellov	vship					
	Select all that apply	(_) Accelerate Entrepreneur						
		(_) Accelerate International (Please also complete Appendix B)						
1.3.	Number of Internships:	2 internship blocks both going to one intern Trea StormHunter.						
1.4.	Keywords to identify reviewers: (5-10 specific keywords; 50% technically related, 50% discipline-related)	Community engagement, solar energy, First Nation, Indigenous, energy security, climate change mitigation.						
1.5.	Academic discipline:	Business						
1.6.	Project priority sectors:	Sustainability & Environment	Environm Science Technolog	ental & gy	Clean Technology			

#### 1.7. List of participants:

Academic Supervisor	Department	Academic Institution	City and Country location of academic institution
Dr. Shirley Thompson	Natural Resource Institute	University of Manitoba	Winnipeg, Manitoba, Canada
Partner organization(s)	Contact name at partner organization	City and Country location of organization	Partner Legal Status
	Derroll Prown	Winnings Monitoba	For Profit Private Corporation
NSK Clean Energy	Darrell Brown	winnipeg, manitoba	First Nation

#### 1.8. Proposed work plan for internship unit(s) (IU):

Please summarize the work plan for the project by showing <u>which intern</u> will work <u>when</u>. Each IU corresponds to one 4-6 month internship. This table provides a high level overview of the proposed research project and information about intern(s) to the reviewers. Please refer to the **Accelerate Guide: Writing your proposal** to assist you.

Years			Year 1		Year 2		Year 3		Year 4			Year 5		5			
	Months		1-4	5-8	9-12	1-4	5-8	9-12	1-4	5-8	9-12	1-4	5-8	9-12	1-4	5-8	9-12
Intern Name	Degree Program	IU															
Trea StormHunter	PhD	2	x	x													
Total Internships       Total Project Funding       \$30,000			15 K	15 K													



## 2. Description of Proposed Research

## 2.1. Project title: Kisik clean energy solar photovoltaic power with Sayisi Dene First Nation

## **2.2.** Background and review of relevant prior work (minimum 500 words):

Renewable energy power is required to realize sustainable development (Lior, 2010). Renewable energy excludes fossil fuels and nuclear, due to their environmental impacts from mining, drilling, and extraction, with their pollution and waste products (US EPA, 2015). Also, significant social and environmental adverse effects of flooding occur from large-scale hydro development in Canada. The negative consequences, including mercury poisoning and permanent displacement from ancestral lands, are suffered disproportionately by Indigenous communities, including O-Pipon-Na-Piwin Cree Nation and Chemasiwin First Nation Manitoba (Thompson, 2015). Although the National Energy Board of Canada (NEB, 2015) still considers large-scale hydro development to be renewable, the US EPA does not (US EPA, 2015). Thus, US hydro generation above 10 MW cannot be applied towards a renewable energy standard (US EPA, 2015).

Green or alternative renewables are small hydro (<10 MW), biomass, solar, wind power or geothermal (Thompson, 2015). Community energy generation offers decentralized power production located close to their service load<sup>1</sup> with local decision-making, throughout all development stages, regarding local employment, community living and environmental issues from planning to operation (Lior, 2010, TREC, 2016). At this small scale, a community or individual can afford to invest in renewable energy. In contrast, the state has to finance the billions needed for large hydroelectric resources (TREC, 2016). The multimillion-dollar large wind farms require international wind industry, referred to as the "windustry," to access sufficient financing. Green energy technologies have recently become cost-competitive in an increasingly broad range of circumstances, including micro and small community levels. However, due to the low price of solar at present, this Kisik project and Gull Bay First Nation Micro-grid project can only occur at the community level, on reserve..

Darrell Brown was the energy consultant working with the Gull Bay First Nation Micro Grid Project, Canada's first fully-integrated remote renewable energy-storage microgrid. A similar project to the Gull Bay First Nation Micro Grid project will be carried out with the Sayisi Dene First Nation using innovative renewable technology. This technology at Gull Bay First Nation combined solar photovoltaic power, battery energy storage, and a microgrid controller to connect to the existing Hydro One remote diesel generating station. This renewable technology will provide clean solar power and reduce 25% or 110,000 litres of its diesel use. Similarly, at the Sayisi Dene First Nation, solar photovoltaic capacity with battery energy storage and a microgrid controller will provide clean solar energy and displace diesel use.

This shift from diesel to solar energy with the integration of "lithium-ion battery energy storage microgrid technology" provides a power reservoir. When the Sun is shining, the Sayisi Dene community receives solar power. Then, the diesel generators will switch off, reducing a significant amount of diesel per year. Although all the feasibility and engineering work will be handled by Kisik staff and contractors, community engagement is needed. Community programs to ensure local well-trained staff receive the jobs and have back-up supports require some training programs. This program will not be limited to the clean energy champions but extend to the community and school-aged children.



#### 2.3. Research Abstract (Approx. 200 words):

Please include Research problem to be addressed and its significance, objectives, and proposed methodology. This section will be used to recruit reviewers; it differs from section 7.2. (Public Project Overview) and must clearly

This clean energy project focuses on shifting a diesel off-grid remote community to solar energy through a microgrid arrangement. Kisik Clean Energy focus is on Indigenous renewable energy projects. The Sayisi Dene community of Tadoule Lake is an isolated northern community in Manitoba requiring plane, snowmobile, dog team sleds, and winter roads to reach without connection to the grid. In 1973, the Sayisi Dene returned to their Barren-ground Caribou hunting life after being relocated to Churchill before 1956 from Little Duck Lake. This relocation represents a grievous assault of the federal government on these people. The Sayisi Dene lived a nomadic caribou-hunting people before 1956 when the Sayisi Dene were forcefully moved to Churchill by the federal government. The Sayisi Dene had been residing at Little Duck Lake (<u>59°24'46.09''N 97°44'1.2''W</u>) in northern Manitoba, their ancestral home, but had to move to a place without caribou.

Green energy infrastructure opportunities are emerging for Indigenous communities, including participation in transmission lines, smart grids and diesel reduction infrastructure in off-grid communities, solar, wind, hydro, biomass and geothermal projects. The Ph.D. student will undertake community engagement over two internships engaging stakeholders from the community with the chief and council to obtain an energy security plan.

**2.4.** General objective of the research project broken down into sub-objectives, activities, themes, or subprojects, as applicable:

The general objectives of this project are:

- Develop training program for community clean energy champions.
- Create awareness in the community of the project with regular updates.
- Engage community, chief and council and community members on energy.

## 2.5. Details of internships or subprojects:

For <u>each</u> intern or subproject, provide the following mandatory information:

a. Name of intern.

## Trea StormHunter

- **b. Specific objectives of the internship or subproject**. Clearly state your [sub-] objectives so reviewers can assess if they are achievable.
- Community Engagement Lead Lead the Community Engagement component and maintain a research journal and schedule to ensure project implementation coordinating all meetings between partnerships, and leading the community meetings, ensuring proper storage of data collected, problem solving to effectively manage all partnerships and chosen communities.
- Coordinating and leading community meetings, ensuring proper storage of data collected, problem solving to effectively manage community engagement with Sayisi Dene First Nation.
- Establish community contacts, organize meetings, workshops and network with respective partners involved in the project.



- Videographer Completing the interviews for the research video, editing the video with careful selection of A and B roll. Presenting the videos to all partnerships to obtain necessary feedback before publishing.
- Report Writer compiling, disseminating and preparing the research process and findings into a report with Kisik Clean Energy and Sayisi Dene First Nation.
- Editor Collaborating with Kisik Clean Energy and Sayisi Dene First Nation.to receive feedback and implement recommendations for the final report to be published.

**c.** Methodologies. Provide enough detail so reviewers can determine if the proposed methodology is appropriate and sufficient to achieve the [sub-] objectives.

The overall approach is secondary data analysis, promotional video, storyboarding and participatory action research. This project will engage community members in workshops and zoom meetings. We will be using mixed-methods in our research (O'Reilly, & Kiyimba, 2015; Robson & McCartan, 2016).

## Address priority needs through community engagement and community-led workshops: (Year 1)

- 1. Identify key professional individuals in the community to contact and create alliances and partnerships with key players.
- 2. Travel to the community by the intern (Once COVID-19 restrictions are lifted) to meet with key players, host a feast, meet with Chief and Council and Community members.
- 3. Organize ongoing meetings with the urban Sayisi Dene members residing in Winnipeg (Once COVID-19 restrictions are lifted) as part of the "off-reserve" community engagement process.
- 4. Set workshop dates in the community.
- 5. Identify 2-3 Clean energy champions in the Sayisi Dene First Nation
- 6. Community Engagement Workshop (Community Focus Groups) with Sayisi Dene First Nation Community to identify the community vision based on the working approach of the Community Economic Development (CED) principles: 1. Self-Reliant 2. Communitybased, 3. Asset-based, 4. Participatory and 5. Sustainability.
- 7. Understanding of the real and perceived barriers/challenges inhibiting greater collaboration between the Kisik Clean Energy and Sayisi Dene First Nation
- 8. Share primary themes with the community following the workshop the next day before leaving the community to ensure accuracy of the information.
- 9. Promotional video, creating social media platforms (Facebook, Instagram, etc.) coming from the community vision and engagement workshops.



d. **Timeline**. We suggest using a Gantt chart to provide a timeline showing <u>which task</u> will be done <u>when</u> to achieve each objective.

		<b>.</b>			G ( 1		NT I	
Objective	May	June	July	August	September	October	November	December
Develop training								
program for								
community clean								
energy champions.								
1. Community								
Engangement/Meeting/								
Background research	х	Х	х					
2. Identify key								
professional individuals								
in the community to								
contact and create								
alliance and partnership								
with key players.	х	Х	Х	х				
3. Bringing materials (if								
required) and set up								
program	х	Х						
4. Identify 2-3 Clean								
energy champions in the								
Sayisi Dene First Nation								
f	x	х						
Creating awareness in								
the community of the								
project with regular								
updates								
1.Integrate local and								
traditional knowledge	x	х	х	х	x	x	х	х
2. Updates to								
community members on								
radio and Facebook		х	х	x	x	x	x	x
3 Promotional video			~	~	~			
creating social media								
platforms (Eacobook								
Instagram etc.) coming								
from the community								
vision and angagement								
workshops						v	v	v
Community						^	^	^
engagement with chief								
and council and								
and council and								
1 Community								
Finded amount workshop								
Community Forms								
(Community Focus								
Community Economic								
Development (CED)								
Development (CED)								
principies				х	х	х	х	Х



2. Ongoing meetings with the urban Sayisi Dene members residing in Winnipeg (Once COVID-19 restrictions are lifted) as part of the "off-reserve"						
community engagement						
process.			X	X	X	
Monitoring and						
evaluation						
1. Understanding of the						
real and perceived						
barriers/challenges						
inhibiting greater						
collaboration between						
the Kisik Clean Energy						
and Sayisi Dene First						
Nation				х	х	x
3. Analyze and use data						
collected to inform and						
influence management						
plans and decisions				х	х	х
4. Reports written up						
and provided of the						
project					х	х

e. Expected deliverables. Each project requires the submission of a completed Mitacs Final Report and Mitacs survey at the end of the project. Please describe the additional expected deliverables of the project i.e. expected outcomes, results, documents (intern's thesis, peer-reviewed journal, conference presentation).

The researchers (Trea and Dr. Thompson) will meet with the community members to share research findings and discuss methods for future Green energy infrastructure opportunities emerging for Indigenous communities. The workshop reports and findings will guide Sayisi Dene First Nation in their future energy development plan. The development of promotional videos and social media campaigns will benefit the Sayisi Dene First Nation to reach a broader audience.

f. Benefit to the intern

The intern will work with communities on academic matters and explore how clean energy can benefit First Nation communities. Trea will benefit from developing and growing networks with Sayisi Dene First Nation and move her thesis process to determine the proposal process. Some of this research will assist with her candidacy.

**g.** Interaction. Indicate the percentage (%) of time during the project that the intern will spend on-site at the partner's location and at the academic institution(s). Research should be carried out equally (50%) in the premises of the partner and the academic institution(s), if different, please include a **justification**. NOTE: The minimum interaction at either site is 25% with a maximum of 75%.

% of partner interaction: \_50\_\_\_ % + % of academic interaction: \_50\_\_ % = 100%

#### h. Partner Interaction.

(1) Provide a detailed description of the activities that will be performed on-site at the partner organization and the expected interaction with and supervision by employees of the partner organization.

Trea will work with Sayisi Dene First Nation leadership, Elders and youth in their community to engage the community on the solar power and build capacity. Activities will include workshops, which may be zoom meetings, to engage the community.

(2) Indicate the resources the partner organization will be providing to support the intern's work at their premises. Include information about (1) space, (2) resources and (3) expertise that will be provided by the organization to the intern.

Partner engagement will mainly be workshops/meetings. With the partner based on research, some educational programming will be developed and implemented.

Mentoring on site will be supervised by Kisik Clean Energy, President Darrell Brown.

## 2.6. Relevance to the partner organization and to Canada:

Describe (1) the partner's proposed role in the project, (2) how the partner will benefit from participating, and (3) how the Canadian community will benefit from this research.

Community engagement is key to working on sustainable energy solutions with First Nation communities. Community engagement is seen as a key component of sustainable energy solutions by f Kisik Clean Energy President Darrell Brown. Darrel is a graduate of the <u>20/20 Catalysts Program</u>, which supports Indigenous people embarking on clean energy projects and Indigenous Clean Energy. The 20/20 Catalyst Program is a Canadian not-for-profit training platform for Indigenous inclusion as key players in Canada's energy futures economy.

- President Darrel Brown supports the view that "energy democracy' is an unprecedented opportunity for Indigenous communities and peoples. Energy democracy upholds inclusive prosperity during the energy transition process.
- Clean energy is a major opportunity for Indigenous economic development and social cohesion to address energy security, affordability, accessibility, environmental issues, and climate action.
- Kisik Clean Energy wants to develop a community engagement process to expand to all First Nation communities across Canada.
- TRC Calls to Action and Kisik Clean Energy hope that more First Nation communities across Canada will invest in clean energy. The Canadian community will benefit by supporting clean energy solutions throughout Canada and minimizing the Canadian ecological energy footprint. The TRC calls for action in creating collaborative partnerships in supporting First Nation communities to build sustainable capacity and self-reliance.
- This research will provide a model of community enagagement, design and implementation Clean Energy solutions.
- Kisik Clean Energy will receive summaries of the community engagement process and we will help train and invigorate the clean energy champions in the community.

## 2.7. Project economic orientation (for submissions with an NFP organization ONLY):

Describe the economic or productivity orientation of the project. NOTE: if <u>any</u> partner listed in this proposal is a notfor profit (NFP) organization, please contact a <u>Mitacs Business Development representative</u> to discuss its eligibility before proceeding with your proposal submission.



N/A

## 2.8. Relationship (if any) to past/other Mitacs projects:

Describe whether or not the current project is related AND provide specifics about the relationship (e.g. not related because it refers to a different research area OR if related: provide information about what has been achieved in past projects and how the current application complements other submissions)

N/A

## 2.9. References:

- Lior, N. (2010). Sustainable energy development: The present (2009) situation and possible paths to the future. *Energy Journal*, *35(10)*, *3976-3994*. http://www.sciencedirect.com/science/article/pii/S0360544210001532.
- United States Environmental Protection Agency (USEPA). (2015). Energy and Environment Guide to Action: State Policies and Best Practices for Advancing Energy Efficiency, Renewable Energy, and Combined Heat and Power (2015 Edition). Retrieved from <u>https://www.epa.gov/sites/production/files/2015-08/documents/guide\_action\_full.pdf</u> on April 12, 2016.
- 3. National Energy Board of Canada. (2015). Energy Information Program. *National Energy Board*. Retrieved From <u>http://www.neb-one.gc.ca/nrg/prgrm-eng.html#fnb1</u> on June 21, 2015.
- USEPA. (2016). Green Power Markets. Retrieved from <u>http://www.epa.gov/greenpower/gpmarket/</u> on June 21, 2016.
- National Energy Board. (2016). Canada's Renewable Power Landscape 2016 Energy Market Analysis. Retrieved from <u>https://www.neb-</u> one.gc.ca/nrg/sttstc/lctrct/rprt/2016cndrnwblpwr/index-eng.html on December 2016.
- Thompson, S. (2015). Flooding First Nations and Environmental Justice in Manitoba: Case Studies of the Impacts of 2011 Flood and Hydrodevelopment in Manitoba. Manitoba Law Journal: 38(2), 220-259.
- 7. TREC. (2016). The Power of Community. Retrieved from: <u>http://www.trec.on.ca/wp-content/uploads/2016/06/TREC\_Primer\_Jun28\_Approved\_Final-LR.pdf</u>
- 8. Gregory, P. (2017). 100% Renewables by 2015. Forbes. Retrieved from: <u>https://www.forbes.com/sites/uhenergy/2017/03/31/100-renewables-by-2050-germany-pays-the-price-for-its-ambition/#416c69df1e98</u>
- 9. Mendonça, M., Jacobs, D., & Savacool, B. (2009). *Powering the green economy. The feed-in tariff handbook.* London: Earthscan.
- 10. Mallon, K. (2006). Renewable energy policy and politics. London: Earthscan.
- 11. Fraser, M. (2008). *Why RFPs don't work*, presented at World Wind Energy Conference in Kingston, 2008. pp. 1-5.
- 12. Nova Scotia Department of Energy. (2011). *Community Feed In Tariff Program*. Nova Scotia Renewables. Retrieved from <u>http://nsrenewables.ca/feed-tariffs</u>.
- Scottish Government. (2010). The Scottish Government. *Target for renewable energy now 80 per cent*. Retrieved from <u>http://www.scotland.gov.uk/News/Releases/2010/09/23134359</u> on April 10, 2012.
- 14. Wirsol, J. (2015). Renewable Energy Sources Act. Energy Revolution. Retrieved from



http://www.wircon.eu/de/the-future-is-decentralizing/renewable-energy-sources-act/en/ on July 28, 2015.

## 3. Declarations

## 3.1 Will the proposed research be taking place outside of the lab or normal business environment?

#### Yes\_x\_\_ No\_\_ X\_

If yes, please complete the following section to indicate what (if any) impact there may be on the environment.

a. Main characteristics of the location (i.e. physical description & coordinates)

## Zoom meetings with Dene. Possibly travel to Tadoule lake for meetings when COVID-19 abates.

b. Principal activity(ies): for each activity, list the environmental elements affected

#### Meetings only, by either Zoom or if safe in person.

c. Are authorizations, permits, or licenses required to undertake any activity during the internship? Yes\_\_\_ No\_\_\_x If yes, please list

<u>Please note:</u> Mitacs may request a copy of the report to ensure compliance.

# 3.2 Does the proposed research involve living human participants whose data, or responses to interventions, stimuli or questions by the researcher, are relevant to answering the research question? Yes\_x\_ No\_\_\_\_

Does the proposed research involve human biological materials, human embryos, fetuses, fetal tissue, reproductive materials or stem cells\*\*? Yes\_\_\_No\_X\_\_

\*\* This applies to materials derived from living and deceased individuals.

If yes to either of the two questions above, the proposal must be approved by the participating academic institution's Research Ethics Board\*, and a valid Ethics approval is required for the duration of the research project. Access to funding may be denied for projects that do not have Ethics approval.

<u>Please note:</u> Mitacs may request a copy of the report to ensure compliance.

#### 3.3 Does the proposed research involve animal subjects? Yes\_\_\_No\_X\_\_

If yes, the proposal must be approved by the participating Institution's Animal Care Committee\*, and a valid approval from the committee is required for the duration of the research project.

<u>Please note:</u> Mitacs may request a copy of the report to ensure compliance.

#### 3.4 Does the proposed research involve the use of biohazards? Yes\_\_\_\_No\_\_X \_\_\_

If yes, the necessary review/report must be conducted in accordance with your academic institution's policies\*, and a valid biohazards approval is required for the duration of the research project.

<u>Please note:</u> Mitacs may request a copy of the report to ensure compliance.

#### 3.5 Have any academic supervisors declared a Conflict of Interest (COI)\* as part of this application?

Yes\_\_\_ No<u>\_\_X\_</u>

If yes, please attach the appropriate documentation outlined in section 4.1.1

#### 3.6 Have any interns declared a Conflict of Interest (COI)\* as part of this application? Yes\_\_No\_X\_

If yes, please attach the signed conflict resolution letter.

\* if you have any questions about the requirement for Research Ethics/Animal Care/Biohazards review or Conflict of Interest Policies at your institution, please contact your corresponding institution's research office.

## 4. Participants

If you are participating in Accelerate International, and your academic supervisor and/or partner organization is overseas, please complete Appendix B

#### 4.1. Lead academic supervisor in Canada:

Name:	Dr. Shirley Thompson.
Academic Institution:	University of Manitoba
Department:	Natural Resources Institute
Address (at academic institution):	220 Sinnott Building
City, Province, Postal Code:	Winnipeg, Manitoba, R3T 5V6
Phone:	204-2918413
Permanent Email:	s.thompson@umanitoba.ca
Alternative E-mail:	

#### 4.2.1. Is the academic supervisor:

- **a.** An owner or a co-owner (including owning shares) of the partner organization: Yes\_\_\_\_No\_X\_\_\_
- **b.** A relative of an owner or co-owner (including owning shares) or a relative of a participant in the day-to-day management of the partner organization: Yes\_\_\_\_No\_X\_\_
- c. An employee of and/or a participant in the day-to-day management of the partner organization: Yes No X \_
- d. A relative of the intern and/or partner supervisors of the proposed project: Yes\_\_\_\_No\_X\_\_

**If yes** to any of the above, please provide a copy of your approved academic institution's Conflict of Interest declaration, or other appropriate documentation such as a letter or email from your Dean, with your application. The documents must describe the nature of the conflict and the measures in place to manage the conflict. Generally, Mitacs will accept the mitigation measures put in place by your academic institution. However, when the conflict is considered significant, Mitacs may require that the academic institution appoint an independent administrator to hold the award and to be responsible for ensuring the best interests of the intern. In such cases, the independent administrator must be included as an applicant, and must submit a declaration that they will act in the best interests of the intern(s).

#### For any additional academic co-supervisors in Canada, copy and paste Section 4.1. and 4.1.1 below:

Legal name:	Kisik Clean Energy (effective 2019)
Operating name (if different):	Kisik Marketing & Communication Ltd.
Contact name:	Darrell Brown
Position:	President for Kisik Clean Energy
Department:	
Address:	686 Campbell Street
City, Province, Postal Code:	Winnipeg, MB R3N-1C3

#### 4.2. Partner organization in Canada:

Phone:	204-479-7556						
Email:	darrell@kisikcleanenergy.com						
Website:	https://www.kisikcleanenergy.com/						
Partner size (number of employees):	1-49						
	For Profit Canadian Private						
Legal status.	Corporation						
If Not for profit Canadian Corporation	Select NFP Type						
NAICS Code (First three digits)*:	221						
* Click here for a list of North America	In Industry Classification System codes.						
Is this the <b>first time</b> the part	Yes						

#### For any additional partner organization in Canada copy and paste Section 4.2. below:

Please note that the financial contribution of organizations with permanent establishments in Canada may be subject to any applicable Goods and Services Tax (GST), Harmonized Sales Tax (HST) and/or Quebec Sales Tax (QST) (collectively VAT).

#### 4.2.1 Invoicing Partner Contact

Partner contributions must be received by Mitacs BEFORE any funds are awarded to the academic institution. **Costs can only be incurred after research approval of the proposal** and the **receipt** of the partner funds at Mitacs.

#### c. Please describe any applicable invoicing requirements (vendor setup, PO, etc.):

Invoicing contact name:	Darrell Brown
Email:	darrell@kisikcleanenergy.com

#### d. Invoicing Partner address:

 X
 Address same as filled in Section 4.2.

 Address same as filled in Appendix B (Section 4.2)

 If invoicing address different than Section 4.2 or Appendix B (Section 4.2), please fill out the following:

Legal name:	
Address:	
City, country, postal code:	
Name of contact:	
Phone:	
Email:	

e. Have these funds been leveraged against other federal or provincial programs? Yes\_\_\_ No\_x\_\_

If yes, please provide details:

#### 4.2.2 Partner Funds at academic institution. IF APPLICABLE

To be completed <u>only</u> if Partner funds were sent as an exception to the academic institution. If **no** please proceed to section 4.3.:

**a.** Is there a **research agreement** in place with the academic institution that governs the use of these partner funds?

Yes\_\_ No X

**If yes** please speak with your BD representative, fill out the *addendum to research agreement document*, and submit that document with your completed application.



If no please complete the following:

**b.** ORS/UILO or equivalent agrees to send these funds to Mitacs: Yes\_\_\_\_No\_\_\_\_

#### If yes, please provide:

Academic institution account	
number:	

#### **c.** The partner agrees by signing this application that the funds can be forwarded: Yes No

#### If yes, please provide:

NAME VENE VUISENNUU VAUNELLEVIESENAUVE	
	•
	-

#### d. Invoicing academic institution contact to receive Mitacs invoice:

Name:	
Department:	
Email:	

e. Is the GST or HST, and QST (if applicable) to be included with invoice to academic institution? Yes\_\_\_\_No\_\_\_\_

If no, tax(es) will be invoiced directly to the industry partner.

#### 4.3. Intern(s) identified:

Name:	Trea StormHunter	
Degree program during internship (masters/PhD/PDF):	PhD	
Expected year of graduation:		2023
If PDF, indicate month/year PhD received:	MM	YYYY
University:	University of Manitoba	
Department:	Natural Resources Institute or Interdisciplinary	
Address at university:	Room 316 Sinnott Building, 70 Dysart Rd.	
City, Province, Postal code:	Winnipeg, MB, R3T 2M6	
Phone:		
Permanent phone or Cell phone	780 655 1449	
Permanent email:	tayzia.stormhunter@gmail.com	
Alternative email:	stormhut@myumanitoba.ca	
Citizenship:	Canadian	
Gender:	Female	

For any additional TBD interns, copy and paste Section 4.4. below:



## 5. Budget and Invoicing

All Accelerate projects are required to include a complete Accelerate Budget and the invoicing schedule on the Excel Budget spreadsheet template must be confirmed. Please refer to the Accelerate Guide: Writing your proposal to assist you

## 6. Suggested Reviewers

#### 6.1. Reviewer's comments. Please select ONE of the following:

\_\_\_\_ We consent to receive reviewer's comments in either official language (French or English).

<u>X</u> We request to only receive reviewer's comments in the language in which this proposal is submitted.

#### 6.2. Please provide the names and contact information of at least SIX (6) arms-length reviewers.

An arms-length reviewer must:

- Be a recognized expert in the research topics and technical aspects covered by the proposal;
- NOT be from the same academic institution as the intern(s) or the academic supervisor(s); and
- NOT have had any collaboration with the intern(s) or the academic supervisor(s) or the partner(s) during the past five (5) years or planned for the near future.

#### Please note that neglecting to suggest reviewers who qualify as arms-length will delay the review of your application.

#### **Reviewer 1:**

		4
Name:	Dr. Alex Wilson	
Academic	University of Saskatchewan	
institution:		
Department:	Aboriginal Education Research Centre	
Email:	alex.wilson@usask.ca	

#### **Reviewer 2:**

Name:	Dr. Stewart Hill	
Academic	Manitoba Keewatinowi Okimakanak (MKO)	
institution:		
Department:	Research and Policy Analysis	
Email:	stewart.hill@mkonorth.com	
	·	

#### **Reviewer 3:**

Name:	Dr. Deborah McGregor	
Academic	York University	
institution:		
Department:	Faculty of Environmental and Urban Change	
Email:	dmcggregor@osgoode.yorku.ca	

#### **Reviewer 4:**

Name:	Dr. Pamela Palmater	
Academic	Ryerson University	
institution:		
Department:	Indigenous Governance	
Email:	ppalmater@ryerson.ca	
 Academic institution: Department: Email:	Ryerson University         Indigenous Governance         ppalmater@ryerson.ca	

#### **Reviewer 5:**

~	0.		
	Name:	Norman Wood	
	Academic	Island Lake Tribal Council	
	institution:		
	Department:		
	Email:	vincentnwood@gmail.com	



#### **Reviewer 6:**

Name:	Si Min	
Academic	Tetratech Environmental	
institution:		
Department:		
Email:	Min.Si@tetratech.com	

#### Potential conflict of interest. \*OPTIONAL\*

Please list reviewers you would prefer Mitacs not to contact.

Name:	
Academic institution /	
Research Group:	
•	
Name:	
Academic institution /	
Research Group:	

#### 7. Mitacs Accelerate Memorandum

The participants listed below confirm that the information presented accurately reflects their intention to apply to the Mitacs Accelerate program. The participants have also agreed to set in place an internship based upon the attached proposal. The participants acknowledge that they have read, understood and agreed to abide by and uphold the Project Responsibilities applicable to each of them, available for reference at <a href="http://www.mitacs.ca/en/programs/accelerate/project-responsibilities">http://www.mitacs.ca/en/programs/accelerate/project-responsibilities</a> which include and are not limited to the following: It is understood that the partner organization contribution shall be provided to Mitacs Inc. in Canadian dollars prior to commencement of the internship; in the event that the sponsor organization funds are at the academic institution, the academic institution shall forward these funds to Mitacs. Upon research approval and the receipt of the partner funds at Mitacs, Mitacs shall forward the funds to the Canadian academic institution as a research grant to the Canadian supervising professor, and the internship stipend/salary will be paid to the student by the academic institution from the grant. Costs associated with this proposal as outlined in the budget can only be incurred after research approval of the proposal and the receipt of the partner funds at Mitacs.

Mitacs is unable to assume liability for any losses including—but not limited to—accidents, illness, travel, or other losses that may occur during the internship period. All undersigned parties agree that they are responsible for ensuring that they have appropriate insurance and meet any institutional policies regarding health, safety, and travel preparation requirements. All parties also agree that the intern will provide Mitacs with a final report and that all participants will complete an exit survey within one month of project completion.

For projects involving international travel: In acknowledging that international exposure can greatly enhance an intern's learning and experience, Mitacs will approve international travel provided that participation does not impact the safety and security of the intern and meets the policies outlined by the home academic institution. By signing this memorandum, you are acknowledging that the home academic institution agrees to assist the intern in meeting all academic institution requirements pertaining to research abroad and that the intern understands that he/she is responsible for obtaining insurance appropriate for the travel destination. Participants in projects involving international travel acknowledge that additional project responsibilities apply to each of them, available for reference at <a href="https://www.mitacs.ca/en/programs/accelerate/mitacs-accelerate-international">https://www.mitacs.ca/en/programs/accelerate/mitacs-accelerate-international</a>. Participants in projects involving international travel also acknowledge that the internship cannot begin and funds cannot be released until Mitacs receives the signed International Pre-Departure Form and Code of Conduct and Ethics forms.

All parties involved with Mitacs Accelerate are bound by the standard intellectual property (IP) terms of the academic institution where the intern is enrolled; except where intellectual property is covered by separate agreements to which the academic institution(s) and the sponsor organization are parties and that are active

during the dates of the internship. By signing this memorandum, if you have separate agreements covering IP between you and the academic institution, you are acknowledging that you are bound by their specific terms and conditions. Otherwise, if you don't have separate agreements, you are bound by the standard intellectual property terms of the academic institution, and by signing this memorandum you agree to the terms of the academic institution. Institution-specific IP policies regarding Accelerate internships can be found at https://www.mitacs.ca/en/programs/accelerate/faq.

The participants also agree that Mitacs will post the title of the project, the public project overview, the name of the partner(s) organization(s), the name of the intern(s), the name of supervisor(s) and the involved academic institution on <a href="https://www.mitacs.ca/en/projects">www.mitacs.ca/en/projects</a> and may be used by Mitacs to publicize Mitacs Accelerate. Mitacs Privacy Policy can be found at <a href="https://www.mitacs.ca/en/projects">www.mitacs.ca/en/projects</a> and may be used by Mitacs to publicize Mitacs Accelerate. Mitacs Privacy Policy can be found at <a href="https://www.mitacs.ca/en/privacy-policy.">www.mitacs.ca/en/projects</a> and may be used by Mitacs to publicize Mitacs Accelerate. Mitacs Privacy Policy can be found at <a href="https://www.mitacs.ca/en/privacy-policy.">www.mitacs.ca/en/privacy-policy.</a>

Internship participants (intern, supervising professor, and partner) further agree to the following addendum(s):

Mitacs does not require, inspect, or enforce any additional terms as outlined by participants in the above addendum.

## 7.1. Title of the Project:

## Kisik clean energy solar photovoltaic power with Sayisi Dene First Nation

#### 7.2. Public Project Overview:

Using simplified language understandable to a layperson; provide a general, one-paragraph description of the proposed research project to be undertaken by the intern(s) as well as the expected benefit to the partner organization. (100 - 150 words)

Sayisi Dene First Nation is a fly-in remote northern Manitoba community wanting to shift to clean energy. Kisik Clean Energy focuses for this project on shifting this diesel energy-dependent First Nation communities to solar energy integrating energy storage with lithium-ion batteries for assisting with microgrid technology. The Sun will soon deliver the Sayisi Dene community's power, and the diesel generators can switch off to reduce the diesel used per year. All the feasibility and engineering work are to be done by Kisik staff with their contractors, with an Indigenous doctoral student from the University of Manitoba assisting with community engagement. Community engagement will help the community build their capacity and interest in solar energy. Community programs to ensure local welltrained staff receive the jobs and have back-up supports requires some training programs. This program will not be limited to the clean energy champions but extend to the community and school-aged children.

#### 7.3. Participant Signatures:

Please sign, scan and save in PDF format

#### 7.3.1. Intern:

Name:	Trea StormHunter
Department:	Natural Resources Institute
Academic institution:	University of Manitoba
	For interns participating in international travel: The intern acknowledges that additional <u>Project</u> <u>Responsibilities</u> found at <u>www.mitacs.ca/en/programs/accelerate/mitacs-accelerate-international</u> apply to Accelerate International travel (as outlined in the Memorandum above) and agrees to abide by these additional program rules. The intern also acknowledges that they are aware of and agree to any IP agreements related to this project.

Signature:	Date: January 29, 2021
------------	------------------------

#### 7.3.2. Academic Supervisor in Canada:

## 7.3.3. Academic Supervisor abroad (if applicable):

Name:	Shirley Thompson	
Department:	Natural Resources Institute	
Academic institution:	University of Manitoba	
Signature:		Date: January 29, 2021

#### 7.3.4. Partner Organization in Canada (if applicable):

Name:	Darrel Brown		
Department:	Clean Energy		
Title/Position:	President		
Organization:	Kisik Clean Energy		
Financial Commitment:	\$7,500		
	The partner organization commits to the funding contribution specified directly above and the payment schedules outlined in the attached <i>Accelerate Budget and Invoicing</i> schedule. These are key conditions of the application and by signing below this proposal, the partner organization agrees to these conditions. Please note that the financial contribution of organizations with permanent establishments in Canada may be subject to any applicable Goods and Services Tax (GST), Harmonized Sales Tax (HST) and/or Quebec Sales Tax (QST) (collectively VAT).		
Signature:		Date: January 29, 2021	

## 7.3.5. Partner Organization abroad (if applicable):

Name:		
Department:		
Title/Position:		
Organization:		
Financial	¢	
Commitment:	φ	
	The partner organization commits to the funding contribution specified directly above and the payment schedules outlined in the attached <i>Accelerate Budget and Invoicing</i> schedule. These are key conditions of the application and by signing below this proposal, the partner organization agrees to these conditions. Please note that the financial contribution of organizations may be subject to applicable taxes.	
Signature:		Date:

#### 7.3.6. Office of Research Services Representative or equivalent:

	· ·	
Name:	Darren Fast	
Title/Position:	Director, partnerships and innovation	

Academic institution:	University of Manitoba	
Signature:		Date:

For any additional participants include corresponding details and signature line below:



## Appendix A – Accelerate Intern Consent Form

#### USE AND DISCLOSURE OF PERSONAL INFORMATION PROVIDED TO MITACS

- 1. All personal information collected is subject to privacy legislation and Mitacs Privacy Policy for Program Participants. For a description of Mitacs' commitment to protect the personal information provided by program applicants, please see <a href="http://www.mitacs.ca/en/privacy-policy">http://www.mitacs.ca/en/privacy-policy</a>.
- 2. All the information supplied in this application will be made available to Mitacs staff responsible for managing the application, for activities including identifying appropriate peer reviewers, administering and monitoring awards, compiling statistics, and evaluating the program.
- **3.** Information supplied in this application will be made available to internal and/or external reviewers, being composed of experts recruited from the academic, public and private sectors. All reviewers are required to commit to keep the application information confidential.
- 4. Contact information in this application may be used by Mitacs staff to contact you in future for:
  - a. Invitations to be profiled in stories or news items, to speak at or attend events, to provide a spotlight story and/or blog post;
  - **b.** Communications about opportunities for Mitacs alumni; and
  - c. Research surveys for Mitacs alumni.

You will have the opportunity to unsubscribe from emails sent to you, once all commitments regarding the internship that is the subject of this application are complete.

- 5. Your name, academic institution and department, and the title of your project may be provided to the federal, provincial and academic institution funders of the Accelerate program, to:
  - a. Enable Mitacs to report on funding contract commitments; and
  - **b.** Allow the funders to evaluate the program.

Additional information, such as passport numbers and dates of birth, may be provided to the international funders of the program (if applicable), for adjudication and reporting purposes.

6. Your name, contact information, and other personal information as required may be provided to the academic institution(s) participating in the internship to enable the academic institution(s) to manage the award, to sign off on the pre-departure form (if applicable), and for reporting purposes.

I, the undersigned, do hereby give CONSENT to the use and disclosure of the information contained in my application for the purposes as described above.

Trea StormHunter Intern Name

Signature

January 31, 2021 Date



## Appendix B – Accelerate International

If internship involves international travel, please complete the following:

#### B 1. Partner interaction (continued from section 2.5g)

Interaction % on site at partner location in Canada	%
Interaction % on site at partner location abroad	%
Interaction % at academic institution in Canada	%
Interaction % at academic institution abroad	%
TOTAL (must equal 100%)	100%

% of partner interaction: \_\_\_\_\_ % + % of academic interaction: \_\_\_\_\_ % = 100%

# **B 1.1 Do any interns expect to spend more than 12 consecutive months outside of their home country?** Yes\_\_\_\_ N $\underline{X}$

If yes, Mitacs may request additional information.

#### B 2. Does this project create new international collaborations? Yes\_\_\_\_ No X

If no, please briefly describe nature of the existing international collaboration. Include a summary of the collaboration, duration of the collaboration, and any past exchange of personnel, etc.

#### B.3. IP ownership

Any intellectual property (IP) generated from an Accelerate International project is bound by the policies of the academic institution where the student/PDF is registered, whether in Canada or abroad, unless a separate intellectual property agreement has previously been successfully negotiated between the academic institution, the industry partner, and (if applicable) the student/PDF. Mitacs makes no claim to intellectual property.

Do the academic institution(s), partner organization(s) and/or intern (if applicable) have a separate IP agreement(s) that will be active during the dates of the internship? Yes\_\_\_ No\_\_\_ In Development \_\_\_\_

Provide an outline of the terms of any existing or planned IP agreement(s) below. A copy of the signed IP agreement must also be provided to Mitacs before a funding decision will be made about the project. Also ensure that the benefit from the project for Canada is clearly described in Section 2.6.

#### **B 4. Additional Participant information:**

#### B 4.1 Academic Supervisor abroad (if applicable):

Name:	
Academic Institution:	
Department:	
Address (at academic institution):	
City, Country:	
Postal Code:	
Phone:	
Permanent Email:	
Alternative E-mail:	



#### B 4.1.1 Is the academic supervisor:

- a. An owner or a co-owner (including owning shares) of the partner organization: Yes\_\_\_\_ No\_\_\_\_
- **b.** A relative of an owner or co-owner (including owning shares) or a relative of a participant in the day to day management of the partner organization: Yes\_\_\_\_ No\_\_\_\_
- c. An employee of and/or a participant in the day-to-day management of the partner organization: Yes\_\_\_\_ No\_\_\_\_
- d. A relative of the intern and/or partner supervisors of the proposed project: Yes\_\_\_\_ No\_\_\_\_

**If yes** to any of the above, please provide a copy of your approved academic institution's Conflict of Interest declaration, or other appropriate documentation such as a letter or email from your Dean, with your application. The documents must describe the nature of the conflict and the measures in place to manage the conflict. Generally, Mitacs will accept the mitigation measures put in place by your academic institution. However, when the conflict is considered significant, Mitacs may require that the academic institution appoint an independent administrator to hold the award and to be responsible for ensuring the best interests of the intern. In such cases, the independent administrator must be included as an applicant, and must submit a declaration that they will act in the best interests of the intern(s).

Legal name:			
Operating name (if different):			
Contact name:			
Position:			
Department:			
Address:			
City, Postal code:			
Country:			
Does the organization have a	Select ves/no		
permanent establishment in Canada?	Select yes/10		
Phone:			
Email:			
Website:		•	
Partner size (number of employees):	Select No. employees		
Legal status:	Select Legal Status		
NAICS Code (First three digits)*:			
* Click here for a list of North American Industry Classification System codes.			
Is this the first time the partner has collaborated with the academic			
	institution? :	Gelect yes/110	

#### B 4.2 Partner organization abroad (if applicable):



## Appendix C - Drop Down - Options

#### Please delete if not applicable

Please refer to the drop down of the section, and type the corresponding answer on the space provided.

#### 1.5. Academic discipline:

- Business
- Computer Science
- Earth Sciences
- Engineering
- Life Sciences
- Mathematical
- Sciences Social Sciences, Arts & Humanities
- Physical Sciences

Advanced

Automotive

Biotechnology

Construction

Education

Clean Technology

**Commercial Services** 

Manufacturing Aerospace

Agriculture & Food

Aquaculture & Fishing

#### 1.6. Project priority sectors:

- Indigenous Affairs -
- Entertainment & Media
  - Environmental Science & Technology
  - Finance & Insurance
    - Forestry
      - Green/Alternative Energy
      - Health and Related Sciences & Technology
      - Information & Communications Technology
      - Life Sciences (not health)
      - Manufacturing & Construction
    - Mining
    - Nanotechnology
    - Natural Gas

- Natural Resources
  - New & Digital Media
- Ocean Tech
- Oil & Gas

-

- Pharmaceuticals
- Public Service, Policy, & Governance
- Sustainability & the Environment
- Technology
- Tourism
- Transportation
- Water
- Other (please describe)

#### 1.7. List of Participants:

-

-

Partner Legal Status:

Energy & Utilities

- For Profit Private Corporation
- Crown Corporation
- Not for Profit Canadian Corporation

#### 4.2. Partner organization in Canada:

#### Partner size (No. employees):

- 1 to 49
- 50 to 99
- 100 to 499
- 500 and higher

#### Legal status:

- For Profit Canadian Private Corporation
- Crown Corporation
- Not for Profit Canadian Corporation

#### First time collaboration with academic institution?

- yes
- no
- 4.3 Intern(s) identified:

#### 4.3.1. Intern information: Trea StormHunter

#### Citizenship:

Canadian:



#### If NFP:

- Charitable Organizations
- Economic Development Organizations
- Health Organizations
- Industry Associations
- Social Welfare Organizations
- Other

#### Gender

- Female

Will this intern conduct any internship units at a partner organization outside Canada?

- no

#### 4.4. TBD

Will this intern conduct any internship units at a partner organization outside their home country? - no

#### B 4.2. Partner organization abroad (if applicable): N/A

#### Does the organization have a permanent establishment in Canada?

- yes
- no

#### Partner size (No. employees):

- 1 to 49
- 50 to 99
- 100 to 499
- 500 and higher

#### Legal status:

- For Profit Private Corporation
- Crown Corporation

#### First time collaboration with academic institution?

- Yes

