

Atnnguyanin Naittuq Uqautaa

QEC-kut Auladjutikhanut Qanurinnikhat Havaakhaq: Akitutilangat pauwaliurnikkut Nunavunmi ihivriuqhiyut tadjat akitutilangat pauwaliurnianik Nunavunmi, ilauyullu akianik niuvvirangamik uqhuryuamik aulladjutikhanik ingniqutit pauwaliurutikhat imatullu manikkut ihumaliurutikhatik ihivriuqhiyarangamik allanik uumaqutikhanut pauwaliurutikhat atuqtakhanik. Ihumagiplugit ayuqhautauniarunaqhiyut uumaqutikhanut pauwaliurutikhat akiliqtuiyup akikhainut unalu QEC-kut manikhanut ihuariakhaa ilaudjutikhanik aallanik uumaqutikhanik aturnikhanut. Aallanguqtaaqtuq akinga uqhuryuat pidjutauvakturlu akinganut pauwatuutit atuqtauyut naunaiyautigiplugu akikhanut ilanganik uumaqutikhanut pauwaliurutikhat Nunavutim pauwatuutikhanik.

Ilaurutikhangat tunihidjutikhanik naunaiyaqhimayumik qanuqtut akikhanik pauwatuutit naunaiqtauvagiakhanik, pinahuaqtat uuma qanurinnikhat tunngavikhangat uqaqatigiigutikhinut nunallaat, timiqutait aallallu tigumiaqtiuyut auladjutikhatigut Nunavunmi. Hamna qanurinnikhat naunaiyautaugittuq pauwaliurutikhanut.

Kangiqhipkaidjutikhait

Qulliq Alruyaktuqtunik Ikumatjutiit (QEC) avaliittuq pauwaliuqtauvaktuq Nunavunmi. Tadja, tamaita QECtkut pauwaliuqtpaktut agyaqtauhimayunik uqhuryuanik. Ihuaqtumik ilaupkaidjutikhait uumaqutikhanut pauwaliurutikhat pauwaliurutanut, QECtkut ihumagiyakhait mangit ayuqhautauyut uumaqutikhanut pauwaliurutikhat. Hanaqiliriangani kangiqhinahuarutikhanik uumaqutikhanut pauwaliurutikhat uqaqatigiigutikhamingnik, kuapuliisitkut tuhaqtitiyut mangit qanuriliurutikhanut pauwaliurutikhat.

QECtkut pinahuaqat tunihilutik qayangnaitunik ihuaqtuniklu pauwaliurutikhanik akikittunik. *QEC-kut Auladjutikhanut Qanurinnikhat* ihuarnikhauyuq titiraq naunaiyaidjutikhanik akikhanut hanaqiutikhaq pauwaliurutikhanik Nunavunmi imatullu pidjutaavaktunik akiliqtuiyut pauwatuutainut akikhainut. Qanuriliurutikhat ikayuutikhaliuqhimayuyq hivunittiami atugakhat havaakhanutlu uqaqutikhanik.

Pauwatuutikhanut Nunavunmi

QECtkut pauwaaqatitivaktut imatut amigaitunut 15,000 pauwatuutimingnut akiliqtuiyuttamaat Nunavunmi. Pauwaliuqtauvaktuq tuniuqhaqtauplunillu Nunavunmiunutauladjutikhainut 25-nut inmikkut uqhuryuaqtuqtunit pauwaaqarviit 25-ni nunallaat, iliuraqtauhimayut aktilakhanikimatut aktigiyumik 76,900 kW. Kupuliisitkut piqaqatitivaktut ingniqutiliqiyinik, alruyiqiyinik alruyaniklu iliurauyikhanik munaqhiyiniq, ikayuutikhaniklu, pingahuni avikturniini havagvingni: Iqaluit, Kangiqliniq, Iqaluktuuttiaq (Ikaluktutiak).

Imatut 55 million litres-nik uqhuryuaqtuqtpaktut ukiuq tamaat pauwaliurutikhamingnik Nunavunmi. Pauwatuutainut akliqtaikhait aallatqiiktut Nunavunmi ilihimayuyullu akituniqhauyut akikhainut Kanadami. Uqhuryuaqtuqtut ingniqutit atuqtauhimmaarniaqtut ingniqutinut pauwaliurutikhat ihuaqtut atuqtauvakhutiklu tamaini nunani Nunavunmi tadja atuqtauhimmaarniaqtut; kihimi, QECtkut ilaliutiyumayait uumaqutikhanut pauwaliurutikhat piyuminaqqata ihuaqqata maniliurutikhanut ikayuutauniaqqata.

Alruyaktuutikhanut Akikhanut Naunaiyautigiyaa

Akikhainut

Nunavutim pauwatuutainut akikhainut ilaqaqtut hapkuninga ihuaqhihimayumut unalu allanguqtaaktut ilakhanut. **Ihuaqhihimayumut akiliqtakhait (alruyaktuutikhanut akikhanut) ilaqaqtut hapkuninga akingat aulapkaijjutikhaq, maniliurutikhait ukuallu aularanginnaqtut aulapkaidjutikhangit a=tamaini nunani avikturniani.**

Allanguqtaaktut ilakhanut (haffuma alruyaktuutikhanut akikhanut) auladjutigivaktat aktilanganik QECtkut akiliqhiktut uqhuryuamik. Hamna allanguqtaaktut ilakhanut niuvrutanut uqhuryuamik pidjutauyut QECtkut akiliqtakhanut ilivaktat akiliqtuiyut pauwatuunmut.

Kinguilirni hitamani ukiuni, tamna allanguqtaaktut ilakhanut aviktuqhimanianut aktilaqaqpaktuq imatut \$0.31/kWh. Aallanganiit hapkuanani allanguqtaaktut akiit nunallaat takunnaqtguq talvani Appendix A.

Uuktuutigilugu, iglugiyayyunut akiliqtakhait pauwamut Arviarmiut imatut aktigiyuq \$0.79/kWh. Ihuaqhihimayumut ilakhanut imatut aktigiyuq \$0.48/kWh ukuallu allanguqtaaktut ilakhanutimatut aktigiyuq \$0.31/kWh.

Atauttimut alruyaktuutikhanut akikhanut = Ihuaqhihimayumut Akiliqtakhait + Allanguqtaaktut Ilakhanut

taimaittunit

Allanguqtaaktut Ilakhanut = QECKkut Uqhuryuat Akiat

unalu

Ihuaqhihimayumut Ilakhanut = aulapkaijjutikhaq, Maniliurutikhait unalu Aulapkaidjutinut Akiliqtakhait

Tukiaqtuq tamna allanguqtaaktut ilakhanut anginiqhauyuq akingat kuapuliisitkut akiliruminaqtat uumaqutikhanut pauwaliurutikhat akitturyuaqhimitumik alruyaktuutikhanut akikhanut. QECKkut niuvvirumik iliuraigumigluuniit uumaqutikhanut pauwaliurutikhainik akitutqiyayunik QECKkut uqhuryuat akianit, tamaita akiliqtakhait pauwaliurutikhanut *akitturyuuminiaqtuq*. QECKkut niuvvirumik iliuraigumigluuniit uumaqutikhanut pauwaliurutikhat akikitqiyayunik taffumanga QECKkut Uqhuryuat Akianit, tamaita akiliqtakhait pauwaliurutikhanut *akikhiyuumirniaqtuq*.

Atauttimut alruyaktuutikhanut akikhanut = Ihuaqhihimayumut Akiliqtakhait + QEC Uqhuryuat Akiat
uvaluuniit

Atauttimut alruyaktuutikhanut akikhanut = Ihuaqhihimayumut Akiliqtakhait + Akinga Niuwvirutanut uumaqutikhanut pauwaliurutikhat

Uuktuutigiplugu qulaanittuq, QECKkut iliuraigumik uumaqutikhanut pauwaliurutikhat atuqtakhanik Arviami akiliqtuutaanik akikitqiyaniq tadjaja uqhuryuaqhitimingnut, tamainut akinga ingniqutitutuqunit pauwaliurnianit nunangani *mikhiyuumirniaqtuq*.

Takuyumayait hivunikhami

Pauwatuutikhanik Naunaitkutikhangit

QECKkut hivulliqpaak angiyuq uumaqutikhanut pauwaliurutikhat uuktuutikhangat Pauwatuutikhanik Naunaitkutikhangit Atuqtakhanik. Pauwatuutikhanik naunaitkutikhangit pilahidjutait akiliqtuiyut inmikkut pauwaliurutikhanginik atuqhugit uumaqutikhanut pauwaliurutikhat ukuallu tuyuutigilugit amiakkut pauwaliuqtatik QECKkut alruyaqtuinikkut pauwatuutimingnut akiliutikhangit alruyaqtuutimingnut akiliqtakhanut. QECKkut Pauwatuutikhanik Naunaitkutikhangit Atuqtakhanik atuqtauyukhat igluqaqtut akiliqtuiyut imatullu atauhirmi hamlatkut kavamangiakiliqtuiyut atauhirmi nunami

Aallat nunaqaqtut, mangit atuffaaqtaulayut ukiungani atuqtumi. Atuqtaungittut mangit ihuaqhiyahunguyut 0-mut iliyahunguyut nunnguani Qiqaiyalirvia ukiuq tamaat. Akiliqtuiyut iliurailayut anginiqaqtumik imatut 10kW pauwaliurutikhamik aktilakhanik atauhirmi igluqpangmut.

Inmikkut Pauwaliuqtauyut Pauwaliuqtit

Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPPs) maligatigut angirutiqallayut, nanminiriyayut piquaqtut inmikkut uvaluuniitaulapkaiyut piliurutikhamingnik iniquutinut pauwaliuqpaktut niuvrutikhaliuqhutik pauwaliuqtamingnik auladjutiktigun taimaitunun QEC-kunut. Tadjaja, *QEC Maligaaq* pipkalimaitat QECKkut niuvviglutik pauwaliuqhimayainik Inmikkut Pauwaliuqtauyut Pauwaliuqtit. Kuapuliisitkut aullaqtiliqtut atuqtakhaliuqhutik ihuaqhautikhanik maliruagakhat unalu hanaqilutik ikayuutikhaliuqhutik atugakhanik

maliktakhaniklu pillahidjutikhainik QECKkut pivalliadjutikhaliurlutik atuqtaulirlunillu Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPP) pinahuaruti.

Ihuaqqatta, QECKkut iliurainiaqtut, nanminirilugit aulapkailutiklu uumaqutikhanut pauwaliurutikhat igluqpangnik; kihimi, hamna piyuminaqtuq pidjutikhanik atuffaanginnarialik aulapkaidjutikhanganik Nunavunmi. Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPPs) hanattarunaqhiyut hivuniptingni uumaqutikhanut pauwaliurutikhat igluqpangnik. Aktilanginut pidjutaavaktut ayuqhautiginiarunaqhiyut Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPPs) uvaluuniit QECKkut nanminiutikkut ihumaliurutikhainut ilautlayut maniliqinikkut atuqtakhainik (i.e. pittarutikhanik hivulliqpamik akituyunut maniliurutikhait), nunanut pidjutaavaktut, maliruagakhat atugakhallu uvaluuniit ihumaliuqhimayuq tikinnahuaqtangit.

Hivulliqpaak havaakhamut hanadjutikhanganik mangit pitquyahimayut pittailitaungittuq QECKkut hanayumagumik uumaqutikhanut pauwaliurutikhat igluqpangnik, hivitutqiyayumik hvaakhamik ikayuutikhamingnik ihuariyugalluaqtitlugu. QECKkut pillimaitunaqhiyut maniliqinikkut maliktakhanginut pidjutauniarunaqhiyut QECKkut pillahiutikhait maningnik atuqtakhamingnik hanadjutikhanut uumaqutikhanut pauwaliurutikhat havaakhanik.

IPP Inmikkut Pauwaliuqtauyut Pauwaliuqtit

- QECKkut maliqaniaqtut hanaqihimayunik niuviktarnirmut atugakhanik.
- Naunaiyattiaqhimayut kantulaakhat naunaiyattiaqhimayunik hanayarialingnut nanminiqautikhanut qanurinnikhait ilaunguyut atuqtakhanut.

Akikhanut-Ikayuutikhanik Naunaiyaidjutait Benefit QECKkut Nanminiqaqtuq vs Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPPs) Nanminiqaqtut

QECKkut Nanminiutait

Ihuaqtut:

- QECKkut atuqpakhimayut pauwaliurnikkut ingniqutiqaqtunit aulapkaidjutikhanganik nunallaani atuqpakhimayut aulapkaidjutikhanik nunallaani; kiullayutlu aallatqiiktunut ayuqhautavaktunut, ilayut pauwaliurutinut ihuarnianut ayuqhautit, ingniqullirangatallu, aallaniklu.
- Uqhuryuamit manikturyuarnaittut naunaiqtaivakhimayut umanga uumaqutikhanut pauwaliurutikhat tuniyauvaktuq akiliqtuyunut.

Ihuirutavaktut:

- Angiyut manit maniliurutikhait piyariaqaqtut, piniarungnaqhiyut uvaluuniit pilimaittunaqhiyut taja manit atuqtauyukhanik kiklivikhaqarlutik.
- Piyariaqarunaqhiyut maniliurutikhanik/kavamatkunit tuniyauhimayut Kavamatuqatkut kavamait/avikturianiitlu).

Inmikkut Pauwaliuqtauyut Pauwaliuqtit

Ihuaqtut:

- QECKkut piyariaqaqtut aallamiktauq pauwaliurutikhamik aktilakhanik akiliqhiyariikqhiatumik akituyut hanivaivunit.
- Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPP) pihimayukhaq tamainik ayuqhautaulayunik aulapkaidjutikhanganik ihuaqhautikhanginiklu havaktauyukhanik havaakhamut.

Ihuirutauvaktut:

- Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPP) havagluaqhimaitunaqhiyut havaakhamik unnahiktuniituni nunaallaani Nunavunmi.
- Pauwaliurutanut akikhainut ihuaqhihimayumut, Naunaiyautauvaktut kantulaat akianik allakiliqtuiyut i.e. allanguqtaaktut ilakhanut pauwaqaqtiyauyut Inmikkut Pauwaliuqtauyut Pauwaliuqtit (IPPs).
- Manikturyuarnaittut tuniyauyuittut akiliqtuiyut.

Talvuuna QECtkut Auladjutikhanut Qanurinnikhat

Naunaitkutikhangit titiraqhimayut ikayuutikhait hivuani uqaqtingnagit:

1. Hamna qanurinnikhaq atuqtakhaliuqhimaittuq naunaiyaittiarutikhanik. Qulvahiutqiyauyug naunaiyautikhaliuqhimayug atuqtakhat hivulliqpanguyug taimaitunut pidjutikhanutlu.
2. *QECtkut Auladjutikhanut Qanurinnikhat* piliuqtauhimaittuq tapkununga atugakhak. Pidjutiqaqtug maningnut idjutikhani ilaayunut alruyaqtuqtut pauwaliurutikhanut, aallatqiiktut akingit pauwaliurutit ayuqhautauarunaqhiyut akiliqtuiyut.
3. Uumani titiqqami kangiqhidjutikhaungittug pitquyingittut akiliqtuiyunut uvaluuniit uumaqtikhanut pauwaliurutikhat janulitanik.
4. Hamna qanuriliurutikhat ilaliutihimaittuq pidjuatuyunut uqhuryuag uvaluuniit uumaqtikhanut pauwaliurutikhat avatimut inuuhirmutluuniit.
5. QECtkut qiniqhianaqtut aallaniklu uqautihamingnik kiudjutikhaniklu pidjutaayunik qanuriliurutikhat.
6. *QEC Auladjutikhanut Qanurinnikhat* uqautigiyait aturnikhanik uvaluuniit hanalutik uumaqtikhanut pauwaliurutikhat aktilakhanik, kihimi, QECtkut ihumaginiaqtait ahinit niuvrutikhamingnik pinahuarutikhanik ihuaqtunik mangit aturnikhanut.
7. Appendix B nappainik amigaitilangita takunnaqtut qulliyut 5 nunallaat aturuminaqtumik annurimin alruyaqtutikharnik (Arviat, Qamanittuaq, Iqaluit, Kaniqliniq Sanikiluarlu). Hamna qauyihaidjutat nappainik hailiyug talvanga QECtkut unniudjut *Aturuminaqtumik Annurimin Alruyaqtutikharnik Nunavunmi Nunalaani imatullu* atuqpautainut kWh atuqpautainut 2015-2016 maniit ukiunganut. Hamna unniudjut hailiyug qaritauyakkurutimi <http://www.cec.nu.ca/power-nunavut/renewable-energy/wind>.

Appendix A – Allanguqtaaktut ilakhanut Nunatigut

Naunaiyautauvaktut Qitiqqautiyuq 1, 2014
akikhainut

NUNALLAAQ	IGLUGIYAIT KAVAMAUNGITTUT AKTILANGA	IHUAQHIHIMAYUMUT ILAKHANUT	ALLANGUQTAAKTUT ILAKHANUT
IQALUKTUUTIAQ	\$0.76	\$0.46	\$0.30
UQHUQTUUQ	\$0.89	\$0.59	\$0.31
TALOYOAK	\$0.98	\$0.63	\$0.36
KUGAARUK	\$1.14	\$0.79	\$0.35
KUGLUKTUK	\$0.93	\$0.63	\$0.31
KANGIQLINIQ	\$0.62	\$0.35	\$0.27
QAMANIITTUAQ	\$0.70	\$0.40	\$0.30
ARVIAT	\$0.79	\$0.48	\$0.31
SALLIQ	\$0.95	\$0.60	\$0.35
IGLULIGAARYUK	\$0.98	\$0.61	\$0.37
TIKIRARYUAQ	\$0.90	\$0.57	\$0.34
NAUJAAT	\$0.85	\$0.55	\$0.30
Iqaluit	\$0.60	\$0.29	\$0.31
PANGNIQTUUQ	\$0.66	\$0.38	\$0.27
KINNGAIT	\$0.69	\$0.38	\$0.31
QAUSUITTUQ	\$1.01	\$0.70	\$0.32
MITTIMATALIK	\$0.90	\$0.63	\$0.27
IGLOOLIK	\$0.63	\$0.39	\$0.25
SANIRAYAK	\$0.89	\$0.62	\$0.27
QIKITARJUAQ	\$0.78	\$0.50	\$0.28
KIMMIRUT	\$1.04	\$0.73	\$0.30
IKPIARYUK	\$0.88	\$0.59	\$0.29
KANGIQTUGAAPIK	\$0.78	\$0.52	\$0.27
AUSUITTUQ	\$0.92	\$0.59	\$0.33
SANIKILUAQ	\$0.82	\$0.52	\$0.31
AKUNNGANIITTUT	N/A	N/A	\$0.31

Appendix B - Havaakhanmut Pidjuttaullayut

Hapkuat havaakhanmut pidjuttaullayut imaitut naunaiyautauvaktutayurnaittut akingit utiqtaaq tunik i.e. qanuqtut hivituniqarniaqqa akiliqtiffaarlugu uumaqutikhanut pauwaliurutikhat aulapkaijjutikhaq naunaiyautauvaktut akinganik uqhuryuamik mikitqiyaanik atuqtuq. Aktilanginut pidjuttauvaktut imaitut ukiuq tamaat munaqhidjutainut ihuaqhautauinulluuniit akiliqtuutait uttiqtitauhimagut maniliurutikhait ilaliutihimaittut naunaiyautainut.

Community	Cost and Penetration	Fuel Consumption (L)	Total kWh sales	Penetration	Annual kWh supplied by wind	Annual Payback at \$0.31	Payback Period in years
Rankin	\$20M and 32%	4,827,400	16,932,600	32%	5,418,432	\$1,679,714	11.9
Rankin	\$28M and 49%	4,827,400	16,932,600	49%	8,296,974	\$2,572,062	10.9
Rankin	\$28M and 32%	4,827,400	16,932,600	32%	5,418,432	\$1,679,714	16.7
Baker Lake	\$19M and 47%	2,288,900	8,201,600	47%	3,854,752	\$1,194,973	15.9
Baker Lake	\$20M and 51%	2,288,900	8,201,600	51%	4,182,816	\$1,296,673	15.4
Baker Lake	\$20M and 47%	2,288,900	8,201,600	47%	3,854,752	\$1,194,973	16.7
Arviat	\$19M and 50%	2,298,600	8,188,600	50%	4,094,300	\$1,269,233	15.0
Arviat	\$21M and 56%	2,298,600	8,188,600	56%	4,585,616	\$1,421,541	14.8
Arviat	\$21M and 50%	2,298,600	8,188,600	50%	4,094,300	\$1,269,233	16.5
Iqaluit	\$35M and 24%	14,933,600	54,951,200	24%	13,188,288	\$4,088,369	8.6
Iqaluit	\$69M and 40%	14,933,600	54,951,200	40%	21,980,480	\$6,813,949	10.1
Iqaluit	\$69M and 24%	14,933,600	54,951,200	24%	13,188,288	\$4,088,369	16.9
Sanikiluaq	\$7M and 33%	985,400	3,464,000	33%	1,143,120	\$354,367	19.8
Sanikiluaq	\$11M and 52%	985,400	3,464,000	52%	1,801,280	\$558,397	19.7
Sanikiluaq	\$11M and 33%	985,400	3,464,000	33%	1,143,120	\$354,367	31.0

Akinga pusantingallu uumaqutikhanut pauwaliurutikhat iliurautanut (ucaluuniit pusantinganik uqhuryuamikhimmahiqtaaqtat uumaqutikhanut pauwaliurutikharnik ukiungani) takkunaqtuq talvani Appendix B unngavaqtauvaktut QECKut unniudjutait "Aturuminaqtumik Annurimin Alruyaqtutikharnik Nunavunmi Nunalaani". Hamna kWh aturniitut aktilangit QECKut atuqpautainut 2015-2016 maniit ukiunganut. Hamna unniudjut hailiyuq qaritauyakkurutimi <http://www.gec.nu.ca/power-nunavut/renewable-energy/wind>. Naittuq unniudjutip iniqtiutaa hapkunani 5 nunaallaani annuqhiryuatqiyauvaktuni takunnaqtuq ataani.

NUNALLAAQ	AKIKHANIK ITQURNARUTIT ANNURIQHIUTIT ILIURAJJUTIKHANIK	UQHURYUAMIK IKIGLIYUUMIUTIKHAT
Sanikiluaq	\$7 million to \$11 million	33% - 52%
Iqaluit	\$35 million to \$69 million	24% - 40%
Arviat	\$19 million to \$21 million	50% - 56%
Kangiqliniq	\$20 million to \$28 million	32% - 49%
Qamanittuaq	\$20 million to \$19 million	47% - 51%