



UNFCCC ITL Administrator

**Standard Independent Assessment Report  
Assessment Report  
Part 2 - Substance**

<b>Reference:</b>	IAR/2013/LIE/2/2	<b>State:</b>	Final
<b>Version number:</b>	2.0	<b>Date:</b>	25/07/2013
<b>Prepared by:</b>	Shaun Calvert – Clean Energy Regulator – Australia		
<b>Reviewed by:</b>	John Bedard/UNFCCC		
<b>Approved by:</b>	Markwin Pieters/UNFCCC		

**Circulation list**

<b>Name/Role</b>	<b>Organization</b>	<b>Info/Action</b>
Shaun Calvert/Assessor	Clean Energy Regulator - Australia	Info
Ling Ling Federhen/Assessor Coordinator	UNFCCC	Info
Mr Andreas Gstoehl	Liechtenstein	Action

**Document change record**

<b>Version</b>	<b>Date</b>	<b>Description</b>
0.1	30/05/2013	Draft
1.0	03/06/2013	Final draft
2.0	25/07/2013	Final

## Summary

Ref Nr	Description	Value	Comments
P2.0.1	Party name	Liechtenstein	
P2.0.2	Reporting period	2012	
P2.0.3	Submission under review	Files submitted: - [SEF] SEF_LIE_2013_1_13-22-40 8-4-2013.xls - [NIR] NIR LIE 2013.pdf - [REPORTS] SIAR_Report_R-2_2012-LI.xls, SIAR_Report_R-3_2012-LI.xls, SIAR_Report_R-4_2012-LI.xls, SIAR_Report_R-5_2012-LI.xls -[RESPONSE] Consultation_form_P12.doc Ch_14_addendum_A1.pdf Ch_14_addendum_A2.pdf	Information from the ITL Administrator: - [SEFCR] SEF_LIE_2013_1_13-22-40 8-4-2013_CR.xls -[RRITL] SIAR_Reports_2012_LIE_RITL_v1.xls
P2.0.4	Previous annual review report reference	FCCC/ARR/2012/LIE (11/03/2013)	

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## 1. Introduction

The SIAR Part 2 report assesses the substance of a Party's annual submission with regard to its national registry. Each section contains questions related to the specific items to be assessed.

### 1.1. Overall assessment

Ref Nr	Requirement	Assessment
P2.1.1	Is the information submitted by Party, in relation to its national registry, complete?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No P1.3.10.
P2.1.2	Problem found with Party's national registry?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
P2.1.3	Any unresolved problem with Party's national registry?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
P2.1.4	Problems identified with the significant changes to the Party's national registry?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No P2.3.3, P2.3.10
P2.1.5	National registry related recommendations from previous annual review were fully addressed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
P2.1.6	Is there any recommendation that needs to be addressed by the Party?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No P2.4.2.1 -- P2.4.2.4

## 1.2. Summary of findings

Ref Nr	Summary of findings
P2.2.1	<ol style="list-style-type: none"> <li>1. The information on Kyoto Protocol units has been reported in accordance with section I.E of the annex to decision 15/CMP.1 and is accurate. The national registry continues to fulfill the requirements related to its reporting and accounting of information on Kyoto Protocol units, transaction procedures, conformance to the technical standards, security, data integrity and recovery measures.</li> <li>2. Party has reported information on its accounting of Kyoto Protocol units in the required SEF tables, as required by decisions 15/CMP.1 and 14/CMP.1. The SIAR assessor reviewed the findings included in the SIAR on the SEF and the SEF comparison report.1 The SIAR was forwarded to the ERT prior to the review, pursuant to decision 16/CP.10.</li> <li>3. Information on the accounting of Kyoto units has been prepared and reported in accordance with section I.E of the annex to decision 15/CMP.1, and reported in accordance with decision 14/CMP.1 using the SEF tables.</li> <li>4. Information reported by Party on records of any discrepancies and on any records of non-replacement were found to be consistent with information provided to the secretariat by the ITL</li> <li>5. Party reported changes in its national registry compared with the previous annual submission. The SIAR assessor concluded that, taking into account the confirmed changes in the national registry, Party's national registry continues to perform the functions set out in the annex to decision 13/CMP.1 and the annex to decision 5/CMP.1. The SIAR assessor recommends that the Party in its next annual submission reports any and all change(s) in its national registry in accordance with section I.G of the annex to decision 15/CMP.1.</li> <li>6. Party has reported its commitment period reserve in its 2012 annual submission.</li> <li>7. The national registry has not fulfilled the requirements regarding the public availability of information in accordance with section II.E of the annex to decisions 13/CMP.1. The SIAR assessor recommends that Party Account information, Holding and transaction information, List of legal entities authorized by Party.</li> </ol> <p><u>Recommendations</u></p> <ol style="list-style-type: none"> <li>8. The assessor notes that Liechtenstein is relying upon public information per 13/CMP.1 Annex paragraph 44, with specific reference to paragraph [45][46][47][48], which is not under the party's direct control. The assessor recommends that Liechtenstein include public information directly on the website of the national registry or via a link from the registry website to another website controlled by the Party. The assessor recommends that the publicly available information be up to date (i.e. updated as close to real time as possible, but at least updated on a monthly basis).</li> <li>9. The assessor notes that Liechtenstein is not fully reporting changes in the national registry related to change of test results. While the</li> </ol>

Ref Nr	Summary of findings
	<p>Party has resubmitted these items during the assessment cycle, the provided test report reveals an incomplete test was performed. This is evidenced by the limited number of Kyoto processes covered and absence of DES compliance demonstration through Annex H testing. Compliance with the DES requirements is essential to maintain confidence that national registry continues to perform the functions set out in the annex to decision 13/CMP.1 and the annex to decision 5/CMP.1. Therefore, the assessor strongly recommends that the Party test each release thoroughly against the DES as part of each major release cycle and provide the complete results in its annual NIR.</p> <p>10. The assessor notes that Liechtenstein is not fully reporting changes in the national registry related to the description of database structure. While the Party has resubmitted the simplified data model during the assessment cycle, the information contained within is deemed incomplete. This is evidenced by the lack of description of each entity in the diagram and the lack of availability of some diagram entities as mandated in the Data Exchange Standard. The assessor recommends that following major changes, the party provide a data model which contains all DES required entities complete with descriptions in its annual NIR.</p>

## 2. Identification of Problems

The purpose of this section is to identify any problems with the national registry based on the Party's annual submission and transaction log records that may affect the performance of the functions of the national registry pursuant to paragraph 88 of the annex to decision 22/CMP.1.

Ref Nr	Requirement	Assessment	Comment
	22/CMP.1 paragraph 88.(a) The information is complete and submitted in accordance with section I.E of the annex to decision 15/CMP.1 and relevant decisions of the COP/MOP;	Assessed in SIAR Part 1. Kept here for completeness	
P2.2.2	22/CMP.1 paragraph 88.(b) The information relating to issuance, cancellations, retirement, transfers, acquisitions, replacement and carry-over is consistent with information contained in the national registry of the Party concerned and with the records of the transactions log;	Problem Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Party submitted a SEF which is consistent with the ITL records.
P2.2.3	22/CMP.1 paragraph 88.(c) The information relating to transfers and acquisitions between national registries is consistent with the information contained in the national registry of the Party concerned and with the records of the transaction log, and with information reported by the other Parties involved in the transactions;	Problem Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Party submitted a SEF which is consistent with the ITL records.
P2.2.4	22/CMP.1 paragraph 88.(d) The information relating to acquisitions of CERs, tCERs, and ICERs from the CDM registry is consistent with the information contained in the national registry of the Party concerned and with the records of the transaction log, and with the clean development mechanism (CDM) registry;	Problem Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Party submitted a SEF which is consistent with the ITL records.

Ref Nr	Requirement	Assessment	Comment
P2.2.5	22/CMP.1 paragraph 88.(e) ERUs, CERs, AAUs and RMUs have been issued, acquired, transferred, cancelled, retired, or carried over to the subsequent or from the previous commitment period in accordance with the annex to decision 13/CMP.1;	Problem Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No discrepancies occurred for the Party and no problem has been identified with regard to its transaction procedures related to ERUs, CERs, AAUs and RMUs.
P2.2.6	22/CMP.1 paragraph 88.(f) tCERs and ICERs have been issued, acquired, transferred, cancelled, retired and replaced, in accordance with the annex to decision 13/CMP.1 and the annex to decision 5/CMP.1;	Problem Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No discrepancies occurred for the Party and no problem has been identified with regard to its transaction procedures related to tCERs and ICERS.
P2.2.7	22/CMP.1 paragraph 88.(g) The information reported under paragraph 11 (a) of section I.E. in the annex to decision 15/CMP.1 on the quantities of units in accounts at the beginning of the year is consistent with information submitted the previous year, taking into account any corrections made to such information, on the quantities of units in accounts at the end of the previous year;	Problem Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Party submitted a SEF which is consistent with the ITL records and with information submitted in the year prior to the reported year.
P2.2.8	22/CMP.1 paragraph 88.(h) The required level of the commitment period reserve, as reported, is calculated in accordance with paragraph 6 of the annex to decision 18/CP.7;	Only assessed by the Expert Review Team. Kept here for completeness	
P2.2.9	22/CMP.1 paragraph 88.(i) The assigned amount is calculated to avoid double accounting in accordance with paragraph 9 of the annex to decision 16/CMP.1;	Only assessed by the Expert Review Team. Kept here for completeness	



Ref Nr	Requirement	Assessment	Comment	
P2.2.10	22/CMP.1 paragraph 88.(j) A discrepancy has been identified by the transaction log relating to transactions initiated by the Party, and if so the expert review team shall:	Has the discrepancy been identified by the transaction log? <b>[ ] Yes [ X ] No</b>	No discrepancies occurred for the Party	
Repeat for each discrepancy type (include Type Number)	P2.2.10.1	22/CMP.1 paragraph 88.(j)(i) Verify that the discrepancy has occurred and been correctly identified by the transaction log;	Has the discrepancy been identified by the transaction log? <b>[ ] Yes [ ] No [ X ] N/A</b>	No discrepancies occurred for the Party
	P2.2.10.2	22/CMP.1 paragraph 88.(j)(ii) Assess whether the same type of discrepancy has occurred previously for that Party;	Has the same type of discrepancy occurred previously for that Party? <b>[ ] Yes [ ] No [ X ] N/A</b>	No discrepancies occurred for the Party
	P2.2.10.3	22/CMP.1 paragraph 88.(j)(iii) Assess whether the transaction was completed or terminated;	Was the transaction completed or terminated? <b>[ ] Yes [ ] No [ X ] N/A</b>	No discrepancies occurred for the Party
	P2.2.10.4	22/CMP.1 paragraph 88.(j)(iv) Has the Party corrected the problem that caused the discrepancy?	Problem that caused the discrepancy corrected? <b>[ ] Yes [ ] No [ X ] N/A</b>	No discrepancies occurred for the Party
	P2.2.10.5	22/CMP.1 paragraph 88.(j)(v) Assess whether the problem that caused the discrepancy relates to the capacity of the national registry to ensure the accurate accounting of Kyoto Protocol units, issuance, holding, transfer, acquisition, cancellation and retirement of ERUs, CERs, tCERs, ICERs, AAUs and RMUs, the replacement of tCERs and ICERs, and the carry-over of ERUs, CERs and AAUs	Discrepancy relates to the capacity of the national registry to ensure the accurate accounting? <b>[ ] Yes [ ] No [ X ] N/A</b>	No discrepancies occurred for the Party

Ref Nr	Requirement	Assessment	Comment	
P2.2.11	22/CMP.1 paragraph 88.(k) Any record of non-replacement has been sent to the Party by the transaction log in relation to tCERs or ICERs held by the Party, and if so the expert review team shall:	Any tCERs or ICERs subject to non-replacement held by Party? <b>[ ] Yes [ X ] No</b>	No non-replacements occurred for the Party.	
Repeat for each non-replacement type (incl Type number)	P2.2.11.1	22/CMP.1 paragraph 88.(k)(i) Verify that the non-replacement has occurred and been correctly identified by the transaction log;	Has the transaction log identified the non-replacement? <b>[ ] Yes [ ] No [ X ] N/A</b>	No non-replacements occurred for the Party.
	P2.2.11.2	22/CMP.1 paragraph 88.(k)(ii) Assess whether non-replacement has occurred previously for that Party;	Has this type of non-replacement previously occurred for that Party? <b>[ ] Yes [ ] No [ X ] N/A</b>	No non-replacements occurred for the Party.
	P2.2.11.3	22/CMP.1 paragraph 88.(k)(iii) Assess whether the replacement was subsequently undertaken;	Was the replacement subsequently undertaken? <b>[ ] Yes [ ] No [ X ] N/A</b>	No non-replacements occurred for the Party.
	P2.2.11.4	22/CMP.1 paragraph 88.(k)(iv) Examine the cause of the non-replacement and whether the Party has corrected the problem that caused the non-replacement;	Has the Party corrected the problem that caused the non-replacement? <b>[ ] Yes [ ] No [ X ] N/A</b>	No non-replacements occurred for the Party.
	P2.2.11.5	22/CMP.1 paragraph 88.(k)(v) Assess whether the problem that caused the non-replacement relates to the capacity of the national registry to ensure the accurate accounting of Kyoto Protocol units, holding, transfer, acquisition, cancellation, and retirement of ERUs, CERs, tCERs, ICERs, AAUs and RMUs, and the replacement of tCERs and ICERs, and if so, initiate a thorough review of the registry system in accordance with part V of these guidelines.	Non-replacement relates to the capacity of the national registry to ensure the accurate accounting? <b>[ ] Yes [ ] No [ X ] N/A</b>	No non-replacements occurred for the Party.

### 3. Identification of Significant Changes

The purpose of this section is to identify any **significant changes** in the national registry reported by the Party that may affect the performance of the functions contained in the annex to decision 13/CMP.1, the annex to decision 15/CMP.1 and the adherence to the technical standards for data exchange between registry systems in accordance with relevant COP/MOP decisions.

If a change to a Party's national registry has been identified under paragraph 22 of the annex to decision 15/CMP.1 then information relating to this change should be submitted by the Party in accordance with paragraph 32 of the annex to decision 15/CMP.1. This section assesses the submitted changes reported by Party in accordance with paragraph 32 of decision 15/CMP.1, and the further guidance elaborated in the Independent Assessment Report common operational procedure.

Ref Nr	Requirement	Has the Party reported a change?	Problem Identified with the Change?	Comment
P2.3.1	15/CMP.1 paragraph 32.(a) The name and contact information of the registry administrator designated by the Party to maintain the national registry	Not a significant change, left here for completeness		
P2.3.2	15/CMP.1 paragraph 32.(b) The names of the other Parties with which the Party cooperates by maintaining their national registries in a consolidated system	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The EU Member States who are also Parties to the Kyoto Protocol (25) plus Iceland, Liechtenstein and Norway have decided to operate their registries in a consolidated manner operated by the European Commission. The Consolidated System of EU registries was certified on 1 June 2012 and went to production on 20 June 2012.
P2.3.3	15/CMP.1 paragraph 32.(c) A description of the database structure and capacity of the national registry.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Party submitted a description of the current database structure of the consolidated registry as provided by the European Commission. (file "Ch_14_addendum_A1.pdf"). The description does not relate to database capacity. Party reports that changes in the current consolidated registry software were not related to Kyoto functions and did not affect the database capacity.

Ref Nr	Requirement	Has the Party reported a change?	Problem Identified with the Change?	Comment
P2.3.4	<p>15/CMP.1 paragraph 32.(d)</p> <p>A description of how the national registry conforms to the technical standards for data exchange between registry systems for the purpose of ensuring the accurate, transparent and efficient exchange of data between national registries, the clean development mechanism registry and the transaction log (decision 19/CP.7, paragraph 1)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>During certification, the consolidated registry was notably subject to connectivity testing, connectivity reliability testing, distinctness testing and interoperability testing to demonstrate capacity and conformance to the DES. All tests were executed successfully and lead to successful certification on 1 June 2012.</p>
P2.3.5	<p>15/CMP.1 paragraph 32.(e)</p> <p>A description of the procedures employed in the national registry to minimize discrepancies in the issuance, transfer, acquisition, cancellation and retirement of ERUs, CERs, tCERs, ICERs, AAUs and/or RMUs, and replacement of tCERs and ICERs, and of the steps taken to terminate transactions where a discrepancy is notified and to correct problems in the event of a failure to terminate the transactions</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>A description of the procedures employed in the Consolidated System of EU Registries to minimize discrepancies is provided in discrepancies procedures, as reflected in the updated manual intervention document and the operational plan provided or referred to by the EU parties.</p>
P2.3.6	<p>15/CMP.1 paragraph 32.(f)</p> <p>An overview of security measures employed in the national registry to prevent unauthorized manipulations and to prevent operator error and of how these measures are kept up to date</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>An overview of the security measures employed in the Consolidated System of EU Registries is provided in security plan provided or referred to by the EU parties.</p>

Ref Nr	Requirement	Has the Party reported a change?	Problem Identified with the Change?	Comment
P2.3.7	15/CMP.1 paragraph 32.(g) A list of the information publicly accessible by means of the user interface to the national registry	Not a significant change, left here for completeness		
P2.3.8	15/CMP.1 paragraph 32.(h) The Internet address of the interface to its national registry	Not a significant change, left here for completeness		
P2.3.9	15/CMP.1 paragraph 32.(i) A description of measures taken to safeguard, maintain and recover data in order to ensure the integrity of data storage and the recovery of registry services in the event of a disaster	<input checked="" type="checkbox"/> Yes [ ] No	[ ] Yes <input checked="" type="checkbox"/> No	An overview of the security measures employed in the Consolidated System of EU Registries is provided in disaster recovery plan provided or referred to by the EU parties.
P2.3.10	15/CMP.1 paragraph 32.(j) The results of any test procedures that might be available or developed with the aim of testing the performance, procedures and security measures of the national registry undertaken pursuant to the provisions of decision 19/CP.7 relating to the technical standards for data exchange between registry systems.	<input checked="" type="checkbox"/> Yes [ ] No	<input checked="" type="checkbox"/> Yes [ ] No	The Party notes that changes have been made to the results of its test procedures related to the October 2012 release of the consolidated registry software that affected only ETS functionality and had no impact on Kyoto functions. The party resubmitted the simplified data model (Ch_14_addendum_A2.pdf). during the assessment cycle, the information contained within is deemed incomplete.

## 4. Recommendations

### 4.1. Previous Expert Review Team recommendations

This section assesses Party's response to the previous annual review recommendations.

Ref Nr	Recommendation from previous Annual Review report (with ref)	Has Party acted on recommendation?	Comment
P2.4.1.1	No recommendations from previous report	<input type="checkbox"/> Yes <input type="checkbox"/> No	
P2.4.1.2		<input type="checkbox"/> Yes <input type="checkbox"/> No	
P2.4.1.3		<input type="checkbox"/> Yes <input type="checkbox"/> No	

### 4.2. Recommendations to address identified problems

If a problem has been identified earlier in section 2 and 3 or a previous recommendation listed in section 4.1 has not been taken into account, then this section of the report lists a recommendation for each problem to be brought to the attention to the Expert Review Team.

Ref Nr	Recommendation Ref	Recommendation description	Comment
P2.4.2.1	P2.3.3, P2.3.10	The assessor notes that Liechtenstein is not fully reporting changes in the national registry related to change of test results and change of database structure. The assessor recommends that [PARTY] provides this information related to the most current implemented version of the consolidated registry software.	The assessor notes that Liechtenstein provided this information in [RESPONSE]. However, additional analysis of the provided documentation reveals an incomplete test was performed and that an insufficient database structure was provided. Based on this information two additional recommendations have been added.
P2.4.2.2	2.3.3	The assessor recommends that following major changes, the party provide a data model which contains all DES required entities complete with descriptions in its annual NIR.	
P2.4.2.3	2.3.10	The assessor strongly recommends that the Party test each release thoroughly against the DES as part of each major release cycle and provide the results of such tests in its annual NIR.	
P2.4.2.4	2.3.7	The assessor notes that Liechtenstein is	The assessor recommends that Liechtenstein includes

		consulting upon public information per 13/CMP.1 Annex paragraph 44, with specific reference to paragraph [45][46][47][48], which is not under the party's direct control.	public information directly on the website of the national registry or via a link from the registry website to another website controlled by the Party. The assessor recommends that the publicly available information be up to date (i.e. updated as close to real time as possible, but at least updated on a monthly basis).
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