CONTENTS

IECRE PV Certification Scheme

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PV SYSTEM Performance Data Reporting Requirements

INTRODUCTION

Assessment of a PV system requires the generation of reliable, compatible and interoperable data to characterize PV plant performance and status at critical milestones.

Stakeholders include Engineering Planning and Construction companies, investors, insurance companies, operators, maintenance companies, utilities and others.

The data exchanged covers all phases of a PV plant and system lifecycle. All relevant data interchanged is unified in form and content across the industry. Technical as well as financial parameters have to be considered for standardization and interoperability.

The standardization of fundamental technical issues dealt with in other IEC standards (e.g. IEC 61724-x) has been considered and the conventions used in this standard are aligned accordingly.

PV SYSTEM Performance Data Reporting Requirements

1 Scope

This Operational Document defines the requirements for the data to be reported in conjunction with issuance of electronic certificates at milestones in the PV system life cycle. The parameters that must be submitted with an electronic submission are named and defined either by other IEC standards, by financial industry standards or are self-evident. This purpose of this Operational Document is to enable the preparation of XML or XBRL data sets from data collected during the assessment by IECRE Inspection Bodies in addition to data collected from automated monitoring devices.

Performance data for all PV systems certified under the IECRE PV Certification Scheme shall be reported in the format presented in section 7.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61724-1 *Photovoltaic system performance – Part 1: Monitoring*

IEC 61724-2 *Photovoltaic system performance – Part 2: Capacity evaluation method*

IEC 61724-3 *Photovoltaic system performance – Part 3: Energy evaluation method*

IEC 62446-2 *Grid connected photovoltaic (PV) systems – Part 2: Maintenance of PV systems*

IECRE 01 *System Basic Rules*

IECRE 02 *System Rules of Procedure*

IECRE 04 PV-OMC *Rules of Procedure*

ISO/IEC 17065: General Requirements for bodies operating certification systems

ISO/IEC 17025: General Requirements for the Competence of Testing and Calibration Laboratories

ISO/IEC 17020: General Criteria for the Operation of Various Types of Bodies Performing Inspections

3 Terms and definitions

For the purposes of this document, the terms and definitions given in the International Electrotechnical Commission Glossary (http://std.iec.ch/glossary) apply.

4 General Provisions

The normative IECRE references define the general requirements for CBs and IBs operating under the PV Certification Scheme.

Additional requirements for CBs and IBs operating within the PV Certification Scheme are described in IECRE PV OMC Operational Documents (e.g. OD 401).

5 Documentation of Completion of PV Project Milestone Certificate

Milestone Certificates resulting in XML or XBRL transmission can be transmitted to stakeholders at any date with the certificate identity uniquely assigned by the IECRE CB or IB. Every transmission must be time stamped and cannot be altered once transmitted. Thus, over time, a record of the PV system performance is compiled.

6 PV System Performance Test Results

The PV system performance shall be reported according to specific requirements for a certain milestone as defined in the relevant Operational Document and in accordance with IEC 61724 series requirements for PV system performance measurements. Specific requirements vary by system category, as defined in the IEC 61724 series.

Test results recorded within IEC IB test reports may include other data (e.g., high frequency monitoring data) that is used to compile specified parameters.

7 TABLE OF DATA ELEMENTS

Data Field Name	Data Field Definition	Data format	Data example
CertificateNumber	AAAAAAA identifies the sector, YYYY identifies the year, OD4XX identifies the OD that is applied, PPPPPPPP provides a unique system identifier assigned by IECRE, CCCCCCCCCC identifies the certificate number assigned by IECRE.	**AAAAAAA.YYYY.OD4XX.PPPPPPPP.CCCCCCCCCC**	**IECREPV.2016.OD402.12345678.0123456789**
CertificateType	OD401, OD402, OD403 or OD4XX	**Milestone**	**OD402**
NameOfSystem		**Name**	**Gondwana#1**
CertificateHolder	entity paying	**Name**	**PG&E**
UtilityConnect	Interconnecting Utility. Utility with whom the grid connection will reside	**Name**	**PG&E**
AHJID	Authority having jurisdiction to define local code requirements	**Name**	**City of San Diego**
DateIssueForProcurement	Design is completed and ready to move forward with ordering equipment and start construction	**yyyy.mm.dd**	**2015.05.21**
DateMechanicalCompletion	Mechanical Completion Date when all major equipment has been installed, but the project is not yet interconnected to the grid	**yyyy.mm.dd**	**2015.05.22**
DateElectricalCompletion	Electrical system is complete including capability to connect to the grid, but not yet fully tested and not necessarily connected to grid	**yyyy.mm.dd**	**2015.05.23**

DateInterconnectAvailability	All of the equipment is in place, so could connect to the grid, (ready to request PTO), but do not yet have permission [is this different from "DateElectricalCompletion"?]	**yyyy.mm.dd**	**2015.05.24**
DateSubstantialCompletion	Substantial Completion Date: when the power plant has been interconnected and is ready to generate power. This is often used for funding purposes.	**yyyy.mm.dd**	**2015.05.25**
DateCompletedCommissioning	Date of commissioning, (i.e. milestone E at last inverter or string commisioned measured at the revenue meter) Includes conditional acceptance by owner	**yyyy.mm.dd**	**2015.05.21**
DatePlacedInService	Placed in Service (PIS) status is a term used for tax purposes and means the plant has met the following: (1) It is synched with the grid, (2) It has no major outstanding permits, (3) It has or is capable of commencing delivery of energy to the grid, (4) Care, custody and control has been transferred to the operator, (5) Critical tests are complete, e.g., those required by the EPC and interconnection agreements.	**yyyy.mm.dd**	**2015.05.22**
PermissionToOperateDate	Permission to Operate Date (PTO) date conditional acceptance and permission from utility is completed and move into operating phase.	**yyyy.mm.dd**	**2015.05.21**
OperationsCommencedDate1	Date the operations of the entity commenced.When interconnection is made and electricity starts flowing onto the grid (Commercial operations date, COD) (Asset mgmt and transaction/trade , 2015 US GAAP Financial Reporting XBRL Tag)	**yyyy.mm.dd**	**2015.05.21**
DateFinalAcceptance	After one year of operation when owner accepts plant	**yyyy.mm.dd**	**2015.05.22**
DateFinalCompletion	Final Completion date when all punch list items are complete.	**yyyy.mm.dd**	**2015.05.23**

LongTermContractForPurchaseOfElectricPowerDateOfContractInitiation	Date of contract initiation of long-term contract to purchase electricity from a production plant. (Asset mgmt and transaction/trade) PPA Effective Date	**yyyy.mm.dd**	**2015.05.21**
LongTermContractForPurchaseOfElectricPowerDateOfContractExpiration	Date of contract expiration of long-term contract to purchase electricity from a production plant. (Asset mgmt and transaction/trade , 2015 US GAAP Financial Reporting XBRL Tag) PPA Expiration Date	**yyyy.mm.dd**	**2015.05.21**
AuthorizedViewerN	security ticket - detail in OD, n integer, multiple security tickets can be issued to link certifier and viewer of data	**alphanumeric**	**a6233578fd**
CertifierIECRE	RECB for issuing this certificate	**Name**	**TUVR**
OperatorID	Entity that is operating the plant at time certificate is issued.	**Name**	**NextEra**
EPC1ID	General contractor	**Name**	**First Solar**
EPC2ID		**Name**	
ContractCcurrency		**international currency letters**	**EUR**
GeoLocationAtEntrance	latitude and longitude at plant entrance	**deg/deg**	
IntSiteClimateClassification	Per IEC 60721	**alphanumeric**	
SiteAltitudeAverage	Average altitude of PV plant array	**m**	**525**
ModuleType1Technology	CdTe, CIGS, ASi, MonoSi, MultiSi, CPV	**technology type**	**MultiSi**
ModuleType1ID	Manufacturer	**Name**	**YINGLI**

ModuleType2Technology	CdTe, CIGS, ASi, MonoSi, MultiSi, CPV	**technology type**	**CIGS**
ModuleType2ID	Manufacturer	**Name**	**Solar Frontier**
ModuleType3Technology	CdTe, CIGS, ASi, MonoSi, MultiSi, CPV	**technology type**	**CdTe**
ModuleType3ID	Manufacturer	**Name**	**First Solar**
InverterType1rating	AC rating of inverter	**kW**	**1000**
InverterType1ID	Manufacturer name	**Inverter type**	**GE**
InverterType1Grounding	Ungrounded (Transformerless), Grounded	**Inverter design to define grounding**	**Grounded**
InverterType2rating	AC rating of inverter	**kW**	**5**
InverterType2ID	Manufacturer name	**Name**	**Fronius**
InverterType2Grounding	Ungrounded (Transformerless), Grounded	**Inverter design to define grounding**	**Ungrounded**
InverterType3Rating	AC rating of inverter	**kW**	**0.25**
InverterType3ID	Manufacturer name	**Name**	**Enphase**
InverterType3Grounding	Ungrounded (Transformerless), Grounded	**Inverter design to define grounding**	**Grounded**
TransformerLVType1Technology	2/3/4 winding, Inverter step up transformer	**technology type**	**2 Winding**
TransformerLVType1ID	Manufacturer of T/f	**Name**	**GE**

TransformerMVType2Technology	2/3/4 winding, Inverter step up transformer	**technology type**	**2 Winding**
TransformerMVType2ID	Manufacturer of T/f	**Name**	**GE**
TrackerdualaxisID	Manufacturer/type ID	**ID designator**	**Pringle 6573**
TrackersingleaxisID	Manufacturer/type ID	**ID designator**	**SesorCCF**
RackingSystemIDID	Manufacturer/type ID	**ID designator**	**SesorCCF**
SystemCapacityContracted	Maximum Generating Capacity: max power accepted by grid. This should be included for full plant, but may be ommitted if the plant is partial	**kW**	**100000**
RatedPowerkWpeakAC	AC Nameplate Capacity at revenue meter	**kW**	**100000**
DCPowerDeisgn	DC Nameplate Capacity: Sum of module ratings at STC as defined in the design	**kW**	**10000**
OffTakeContractType	Contract type (PPA, Merchant, etc.)	**Name**	**PPA**
Model metadata preferably entered at time OD-403 is completed			
Major Design Modelv0	version used for Perf. Prediction	**Design Model**	**NREL SAM**
UpdatedDesignModelv1	version used for 2nd Perf. Prediction	**Design Model**	**NREL SAM**
AssumedIrradiationDesignModel1	plane of array (POA) irradiation per annum	**kWh/m2a**	
AssumedIrradiationDesignModel2	plane of array (POA) irradiation per annum	**kWh/m2a**	
ModelFactorsSoiling	Annualized dust soiling loss	**%**	**3**

ModelFactorsSnow	Annualized Snow Loss	**%**	**5**
ModelFactorSeriesResistance	AnnualizedOhmic Losses (both AC and DC)	**%**	**0.8**
ModelFactorMismatch	Annualized Module Array Mismatch Loss because of differences between modules	**%**	**0.3**
ModelFactorShade	Annualized Shading Loss	**%**	**10**
ModelFactorsParasiticLoss	Annualized Parasitic Energy loss (inverters, trackers, etc.)	**kWh**	**5050**
ModelFactorsExternalCurtailment	Annualized loss due to curtailment required by outside party	**kWh**	**3100**
ModelFactorsNonUnityPowerFactor	Annualized loss due to operating at non-unity power factor	**kWh**	**19520**
PredictedEnergyRevenueMeter	Predicted Active Electrical Production at the revenue meter for each year, Eout (kWh) per IEC 61724-3 using historical weather data that is considered to be representative for the site; the Predicted_energy should be reduced from the total predicted energy to reflect times of unavailability and parasitic losses, if applicable. Sometimes called Energy Production Estimate.	**kWh/a (matrix for "n" years, where "n" is expanded for the number of years found for the plant performance model)**	**60000**
PredictedEnergyAvailability	Predicted Energy Availability at the revenue meter estimate by Year using historical weather data; the modeled predicted energy for unity availability may be obtained by dividing "Predicted_energy_revenue_meter" by "Predicted_Energy_Availability". Sometimes called System Availability	**ratio, dimensionless (matrix for "n" years, where "n" is expanded for the number of years found for the plant performance model)**	**1**

PredictedO&Mcost	Predicted cost of ownership for system by Year	**currency/a (matrix for "n" years where "n" is expanded for the number of years found for the plant performance model)**	**5000**
Data entered when IEC 61724-2 (Capacity test) is executed for unconstrained operation			
StartDateElectricalPowerTest	time stamp indicating first day of IEC 61724-2 test, administered under OD-401 or OD-402	**yyyy.mm.dd**	**2015.05.21**
EndDateElectricalPowerTest	time stamp indicating final day of IEC 61724-2 test, administered under OD-401 or OD-402	**yyyy.mm.dd**	**2015.05.21**
PowerTargetCapMeasurement	Power expected for capacity measurement when executing IEC 61742-2for the specified target conditions	**kW**	**1000**
PcorrMeasuredCapacity	Power measured at the targeted measurement conditions by IEC 61724-2	**kW**	**950**
PowerPerformanceIndex	Ratio of measured to targeted power from IEC 61724-2 measurement, section 6.4	**ratio, dimensionless**	**0.95**
IrradianceforPowerMeasurement	Irradiance used for the Targeted conditions for the capacity measurement using IEC 61724-2	**kWh/m2**	**1000**
AmbientTemperaturePowerMeasurement	Ambient temperature used for the Targeted conditions for the capacity measurement using IEC 61724-2	**°C**	**20**
CommentsPowerMeasurement	Additional information needed to explain Capacity measurement	**text field - up to 400 characters**	**Wind speed for test was specified to be**

			1 m/s
Other parameters relative to completion of plant as documented by OD-401			
ArrayCapacityAsBuiltDC	The DC rating as measured by the flash data	**kW**	**1000321**
Data entered when 61724-3 (one-year energy test) is executed			
StartDateElectricalEnergyTest	time stamp indicating first day of IEC 61724-3 test, administered under OD-402	**yyyy.mm.dd**	**2015.05.21**
EndDateElectricalEnergyTest	time stamp indicating final day of IEC 61724-3 test, administered under OD-402	**yyyy.mm.dd**	**2015.05.21**
REIBName	RE Inspection body completing annual test	**Name**	**DNVGL**
MeasurementClassIEC	Measurement class per IEC 71724	**Class type**	**A**
PerformanceModelModified	Has performance model been modified relative to previous test?	**y/n**	**Y**
Parameters associated with meteorological data			
OneYearinPlaneMeasuredIrradiation	One-year in-plane irradiation, Hi, as described in IEC 61724-1 Ed. 2 (Class A, B, or C, as appropriate for U1, U2, U3, or U4) in Table 10, Section 9.3 and Table 3, section 7 and as tabulated under the guidance of IEC 61724-3. A class C measurement allows use of satellite data for irradiance.	**kWh/m2**	**1500**
ExpectedEnergyatRevenueMeter	Expected Active Electrical Production at the revenue meter for indicated time period, Eout (kWh) per IEC 61724-3 using measured weather data during times of availability and including adjustments for parasitic losses. See Section 6.6.6 of IEC 61724-3.	**kWh/a**	**60000**

ExpectedEnergyUnavailableTimes	Calculated from measured weather during times of unavailability as per IEC 61724-3 section 6.6.5 (see Section 8.13(ii)).	**kWh**	**1000**
ExpectedEnergyUnavailableTimesExternal	Calculated from measured weather during times of unavailability that have been identified to be caused by external events as per IEC 61724-3 section 6.6.5 (see Section 8.13(ii)).	**kWh**	**1000**
TotalExpectedEnergyRevenueMeter	Sum of expected energies for both times of availability and unavailability (Expected_energy_revenue_meter+expected_energy_unavailable_times)	**kWh**	**1010**
Parameters associated with plant performance data			
MeasuredEnergyInclParasitics	Active (real) energy measured for the indicated time period according to IEC 61724-3 sec 6.7 including adjustment for parasitic losses	**kWh**	**1000**
MeasuredEnergyAvailability	Measured Energy Availability for the indicated time period calculated from the measured weather data and observed availability according to IEC 61724-3, section 6.8. may be obtained by dividing "Expected_energy_revenue_meter" by "Expected_energy_Unavailable_Times"	**ratio, dimensionless**	**1**
ExternalCauseExcludedEnergyAvailability	Actual Energy Availability For the Year excluding time of external or other outage causes per IEC 61724-3 section 6.8.1	**ratio, dimensionless**	**0.99**
AllInEnergyPerformanceIndex	Active (real) energy performance index including times when the system is not functioning as in IEC 61724-3 section 6.8.	**ratio, dimensionless**	**0.9**
InServiceEnergyPerformanceIndex	Active (real) Energy Performance Index during times when the system is functioning (offline times removed) as in IEC 61724-3 section 6.8	**ratio, dimensionless**	**0.9**
ParasiticLossMeasured	Are parasitic losses measured in the test?	**Yes/No**	**No**

MeasurementProcedureDeviations	Test Procedure pertains to IEC 61724-3	**Yes/No**	**No**
CapacityFactorIEC	Active (Real) energy generation of plant relative to energy that would have been generated if the plant was operating continuously at its AC rated power, per IEC 61724-3 section 6.8.2	**dimensionless**	**0.25**
MeasurementUncertainityBasis	Standard method used to calculate Uncertainity of measurement	**Method Used**	**ISO/IE Guide 98-1:2009**
StatedUncertaintyValueExpectedEnergy	Uncertainty in expected energy arising from uncertainty in the measured weather data	**Percentage**	**±3**
StatedUncertainityValueEnergyMeasured	Value Quantification of Total Uncertainity (including bias and precision)of Energy Measured	**Percentage**	**±3**
ExpectedO&MCost	Cost of ownership for system based on the Predicted_O&M_Cost, but with the expected value for the particular time period used for this test.	**currency/W**	**1**
MeasuredO&MCost	Cost of ownership for system based on documented expenses for the particular time period used for this test.	**currency/W**	**1**
ActualCostUnavailabilityDrivenLostEnergy	Cost for lost revenue from lost energy generation during year-long test	**currency/W**	**1**
ActualCostPenaltiesLostEnergy	Cost of penalties for loss of performance during yearlong test	**currency/W**	**1**
ActualCostLowPerformanceDrivenLostEnergy	Cost of imperfect performance during annual test	**currency/W**	**1**
ActualCostPenaltiesAvailLostEnergy	Cost of penalties due to unavailability during period of test	**currency/W**	**1**

Parameters expected to help understand the future health of the plant			
RPN	Risk Priority Number	**dimensionless**	**1**
PQL	Plant Quality Level	**dimensionless 1-10**	**1**
Table financial identifiers			
FinancingName		**Name**	
FinancingLoanNumber		**alphanumeric**	
FinancingName2		**Name**	
FinancingLoanNumber2		**alphanumeric**	
FinancialSecurityName		**alphanumeric**	
FinancialSecurityNumber		**alphanumeric**	
PerformanceInsuranceName		**Name**	
InsurancePolicyNumber		**alphanumeric**	
InsuranceName2		**Name**	
InsurancePolicyNumber2		**alphanumeric**	
Extended financial parameters (optional)			
Predicted OperatingExpenses		**currency/W**	

Predicted AssetManagementCosts		**currency/W**	
Predicted GeneralInsuranceExpense		**currency/W**	
Predicted ExciseAndSalesTaxes		**currency/W**	
Predicted RealEstateTaxExpense		**currency/W**	
Predicted UtilitiesCosts		**currency/W**	
Predicted OtherExpenses		**currency/W**	
Predicted AuditingFee		**currency/W**	
Predicted TaxPreparationFee		**currency/W**	
Predicted OtherAdministrativeFees		**currency/W**	
Predicted SiteLeasePayment		**currency/W**	
Predicted CurrentFederalTaxExpenseBenefit		**currency/W**	
Predicted CurrentStateAndLocalTaxExpenseBenefit		**currency/W**	

Predicted OtherTaxExpenseBenefit		**currency/W**	
Predicted CostsAndExpenses		**currency/W**	
Predicted PaymentsForRent		**currency/W**	
Predicted ElectricalGenerationRevenue		**currency/W**	
Predicted PBIRevenue		**currency/W**	
Predicted RECRevenue		**currency/W**	
Predicted RebateRevenue		**currency/W**	
Predicted OtherIncome		**currency/W**	
Predicted Revenues		**currency/W**	
Predicted CostOfServicesDepreciationAndAmortization		**currency/W**	
Predicted PrincipalAmountOutstandingOnLoansManagedAndSecuritized		**currency/W**	
Predicted InvestedCapital		**currency/W**	
Predicted TotalOfAllProjectAccountBala		**currency/W**	

nces			
Predicted UnleveredInternalRateOfReturn		**Percentage**	
Predicted All-inYield		**Percentage**	
Predicted PropertyPlantAndEquipment UsefulLife		**yyyy.mm.dd.hh.mm.ss**	
Predicted PropertyPlantAndEquipmentSalvageValue		**currency/W**	
Predicted Tax-EquityCashDistributions		**currency/W**	
Predicted OtherPaymentsToFinanciers		**currency/W**	
Predicted HypotheticalLiquidationAtBookValueBalance		**currency/W**	
Predicted PartnershipFlipDate		**yyyy.mm.dd.hh.mm.ss**	
Predicted PartnershipFlipYield		**Percentage**	
Predicted All-inYield		**Percentage**	

Predicted DebtInstrumentPeriodicPaymentPrincipal		**currency/W**	
Predicted DebtInstrumentPeriodicPaymentInterest		**currency/W**	
Predicted DeficitRestorationObligation		**currency/W**	
Predicted DeficitRestorationObligationLimit		**currency/W**	
Actual OperatingExpenses		**currency/W**	
Actual AssetManagementCosts		**currency/W**	
Actual GeneralInsuranceExpense		**currency/W**	
Actual ExciseAndSalesTaxes		**currency/W**	
Actual RealEstateTaxExpense		**currency/W**	
Actual UtilitiesCosts		**currency/W**	
Actual OtherExpenses		**currency/W**	
Actual AuditingFee		**currency/W**	

Actual TaxPreparationFee		**currency/W**	
Actual OtherAdministrativeFees		**currency/W**	
Actual SiteLeasePayment		**currency/W**	
Actual CurrentFederalTaxExpenseBenefit		**currency/W**	
Actual CurrentStateAndLocalTaxExpenseBenefit		**currency/W**	
Actual OtherTaxExpenseBenefit		**currency/W**	
Actual CostsAndExpenses		**currency/W**	
Actual PaymentsForRent		**currency/W**	
Actual ElectricalGenerationRevenue		**currency/W**	
Actual PBIRevenue		**currency/W**	
Actual RECRevenue		**currency/W**	
Actual RebateRevenue		**currency/W**	
Actual OtherIncome		**currency/W**	

Actual Revenues		**currency/W**	
Actual CostOfServicesDepreciationAndAmortization		**currency/W**	
Actual PrincipalAmountOutstandingOnLoansManagedAndSecuritized		**currency/W**	
Actual InvestedCapital		**currency/W**	
Actual TotalOfAllProjectAccountBalances		**currency/W**	
Actual UnleveredInternalRateOfReturn		**Percentage**	
Actual All-inYield		**Percentage**	
Actual PropertyPlantAndEquipmentUsefulLife		**yyyy.mm.dd.hh.mm.ss**	
Actual PropertyPlantAndEquipmentSalvageValue		**currency/W**	
Actual Tax-EquityCashDistributions		**currency/W**	

Actual OtherPaymentsToFinanciers		**currency/W**	
Actual HypotheticalLiquidationAtBookValueBalance		**currency/W**	
Actual PartnershipFlipDate		**yyyy.mm.dd.hh.mm.ss**	
Actual PartnershipFlipYield		**Percentage**	
Actual All-inYield		**Percentage**	
Actual DebtInstrumentPeriodicPaymentPrincipal		**currency/W**	
Actual DebtInstrumentPeriodicPaymentInterest		**currency/W**	
Actual DeficitRestorationObligation		**currency/W**	
Actual DeficitRestorationObligationLimit		**currency/W**	
PowerCustomerName		**Name**	
PercentMerchantPowerSales		**Percentage**	
GeneralPartnerMember0		**Name**	

LimitedPartnerMember1		**Name**	
LimitedPartnerMember2		**Name**	
LimitedPartnerMember3		**Name**	
LimitedPartnerMember4		**Name**	
LimitedPartnerMember5		**Name**	
LimitedLiabilityCompanyLLCOrLimitedPartnershipLPManagingMemberOrGeneralPartnerOwnershipInterest0		**Percentage**	
LimitedLiabilityCompanyLLCOrLimitedPartnershipLPMembersOrLimitedPartnersOwnershipInterest1		**Percentage**	
LimitedLiabilityCompanyLLCOrLimitedPartnershipLPMembersOrLimitedPartnersOwnershipInterest2		**Percentage**	
LimitedLiabilityCompanyLLCOrLimitedPartnershipLPMembersOrLimitedPartnersOwnershipInterest3		**Percentage**	
LimitedLiabilityCompanyLLCOrLimitedPartnershipLPMembersOrLimitedPartnersOwnershipInterest4		**Percentage**	

LimitedLiabilityCompanyLLCOrLimitedPartnershipLPMembersOrLimitedPartnersOwnershipInterest4		**Percentage**	
IncomeTaxExpenseBenefitIntraperiodTaxAllocation0		**currency/W**	
IncomeTaxExpenseBenefitIntraperiodTaxAllocation1		**currency/W**	
IncomeTaxExpenseBenefitIntraperiodTaxAllocation2		**currency/W**	
IncomeTaxExpenseBenefitIntraperiodTaxAllocation3		**currency/W**	
IncomeTaxExpenseBenefitIntraperiodTaxAllocation4		**currency/W**	
IncomeTaxExpenseBenefitIntraperiodTaxAllocation5		**currency/W**	
DistributionMadeToLimitedPartnerCashDistributionsPaid0		**currency/W**	
DistributionMadeToLimitedPartnerCashDistributionsPaid1		**currency/W**	
DistributionMadeToLimitedPartnerCashDistributionsPaid2		**currency/W**	
DistributionMadeToLimitedPartnerCashDistributionsPaid3		**currency/W**	

DistributionMadeToLimitedPartnerCashDistributionsPaid5		**currency/W**	
DistributionMadeToLimitedPartnerCashDistributionsPaid4		**currency/W**	
EquityMethodInvestmentOwnershipPercentage0		**Percentage**	
EquityMethodInvestmentOwnershipPercentage1		**Percentage**	
EquityMethodInvestmentOwnershipPercentage2		**Percentage**	
EquityMethodInvestmentOwnershipPercentage3		**Percentage**	
EquityMethodInvestmentOwnershipPercentage4		**Percentage**	
EquityMethodInvestmentOwnershipPercentage5		**Percentage**	