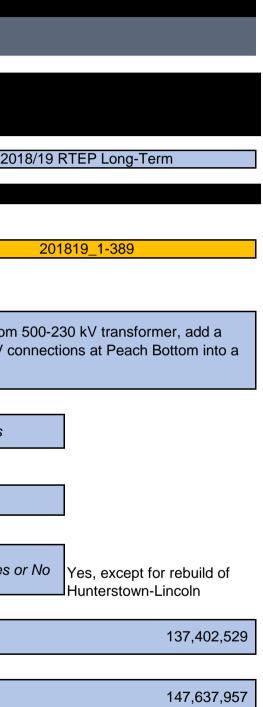


# **Executive Summary**

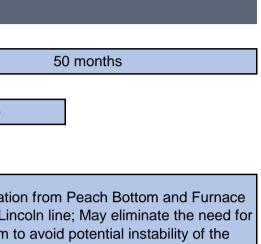
	Instruction	6		I	nputs
Provide the name of party.	of the Proposing Entity. If there a	re multiple entities, please identify each	1.a.	Proposing Entity name	1
Provide the RTEP	Proposal Window in which this pr	oposal is being submitted.	1.b.	Proposal window	
Provide the Propose between proposals	• • • • •	e "A, B, C,", etc. to differentiate	1.c.	Proposal identification	
PJM proposal iden	ification		1.d.	PJM proposal identification	
X and Y substation	s utilizing AAA structures. A new	oject (e.g. Project is a new line between bay will be created within the existing ured to a breaker and a half with	1.e.	General project description Rebuild the Hunterstown-Lincoln 115 kV line, ad Peach Bottom-Graceton 230 kV line and reconfig	
accomodations for	•			new switching station	<u> </u>
accomodations for Identify if the propo I.e. The proposal to Owner. This grou	the new line.) sal or a proposal component spa pology connects equipment own p includes transmission that spar	n two PJM Transmission Owner zones. ed by more than one Transmission s two or more affiliated companies (e.g.	1.f.	new switching station Tie line impact	
accomodations for Identify if the propo I.e. The proposal to Owner. This grou Meted and Alleghe Indicate if the proje PJM to NYISO) iss	the new line.) osal or a proposal component spa opology connects equipment own o includes transmission that spar ny Power). ct is being proposed as a solution	ed by more than one Transmission	1.f. 1.g.		
accomodations for Identify if the propo I.e. The proposal to Owner. This grou Meted and Alleghe Indicate if the proje PJM to NYISO) iss all regional and inte Indicate if the Prop	the new line.) sal or a proposal component spa pology connects equipment own o includes transmission that spar ny Power). ct is being proposed as a solution ue. (Note: The Proposing Entity is	ed by more than one Transmission s two or more affiliated companies (e.g. n to a cross-border (e.g. PJM to MISO, s responsible for initiating and satisfying		Tie line impact	
accomodations for Identify if the propo I.e. The proposal to Owner. This grou Meted and Alleghe Indicate if the proje PJM to NYISO) iss all regional and inte Indicate if the Prop infrastructure built	the new line.) psal or a proposal component spa ppology connects equipment own o includes transmission that spar ny Power). ct is being proposed as a solution ue. (Note: The Proposing Entity is erregional requirements.) osing Entity intends to construct, under this proposal.	ed by more than one Transmission s two or more affiliated companies (e.g. n to a cross-border (e.g. PJM to MISO, s responsible for initiating and satisfying	1.g.	Tie line impact Interregional project	





# **Executive Summary**

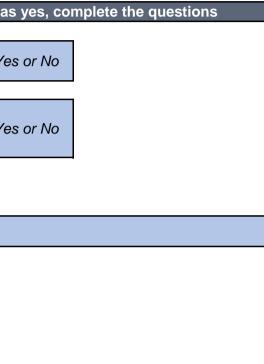
ecutive Summary Instructions		I	nputs
Project estimated schedule duration in months.	1.k.	Project schedule duration	
Indicate if any cost containment commitment is being proposed as part of the project. If yes, the "10. Cost Contain" tab within this project proposal template is to be completed	1.I.	Cost containment commitment	No
	1.m.	Additional benefits	
If the project provides any known additional benefits above solving the identified violations constraints, identify those benefits (e.g. reliability, economic, resilience, etc.).	s or	Addresses additional congestion on lines into Con Run created as a result of increasing capacity on the special protection system presently in place a Muddy Run generating units	Hunterstown-Line
Confirm that all technical analysis files have been provided for this proposal.	1.n.	Technical analysis files provided	<ul> <li>✓</li> </ul>
Confirm that all necessary project diagrams have been provided for this proposal.	1.o.	Project diagram files provided	
Indicate if company evaluation and operations and maintenance information has been provided for this proposal.	1.p.	Company evaluation and operations and maintenance information provided	





# **Executive Summary**

1. Executive Summary			
Instructions		Inp	uts
		If the answer to the cross-border question abov	e at 1.g. wa
Indicate if an evaluation for interregional cost allocation is desired.	1.q.i.	Interregional Cost Allocation Evaluation	Choose Y
Indicate if the proposal has been evaluated in a coordinated interregional analysis under the	1.q.ii.	Evaluated in interregional analysis under PJM Tariff or Operating Agreement provisions	Choose Ye
PJM Tariff or Operating Agreement provisions. Specify the analysis and applicable Tariff or Operating Agreement provisions.		If 'yes,' specify analysis and applicable Tariff or Operating Agreement provisions	
List the specific regional and interregional violations and issues from the regional and/or interregional analyses that identified the violations and issues addressed by the proposal.	1.q.iii.	Regional and Interregional violations and issues from the Regional and/or Interregional analyses that identified the violations and issues addressed by the proposal.	



Page 3 of 17



2.a.

### **Overloaded Facilities**

#### 2. Overloaded Facilities

	sed by the proposed pro	ject						
uctions:	Identify the criteria vi	olation(s) or system constraint(s) that the	e proposed project sol	ves or mitigates				
FG #	Analysis Type	Bus #	Facility Name	To Bus #	To Bus Name	СКТ	Voltage	Area
								<u> </u>



2.b.

### 2. Overloaded Facilities

structions:	Identify the criteria violation(s) or system constraint(s) that the proposed project causes or does not address.										
Unique Proposer Generated ID	Analysis Type	Bus #	Facility Name	To Bus #	To Bus Name	СКТ	Voltage	Area			

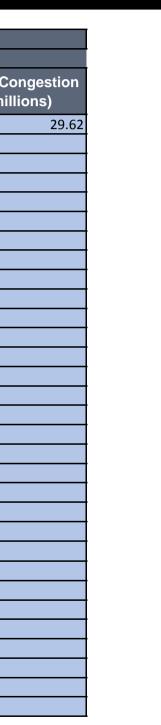


2.c.

### **Overloaded Facilities**

### 2. Overloaded Facilities

nstructions:	Identify the Market Efficiency flowgate	Identify the Market Efficiency flowgate(s) the proposed project mitigates.											
FG# ME-1	Facility Name	Area	Area Type		Market Congestion (\$ millions)	Frequency (Hours)	Market Co (\$ mill						
	Hunterstown-Lincoln 115 kV line	METED	Internal FG	1720	20.77	1832							





3.

Instructions			Component 1	Component 2	Component 3
Provide a description for each major project component. Each project component will require the completion of the tab corresponding to the category of the component ("Greenfield Substation Component" cab for any proposed new substation, for example).	3.a.	Component description(s)	Rebuild Hunterstown-Lincoln 115 kV line	Add Peach Bottom 500-230 kV transformer, add Peach Bottom- Graceton 230 kV line, add 230 kV switching station at Peach Bottom (includes subcomponents 2a-2f as described in tabs 4-7)	
Provide a component project cost breakdown into the identified categories along with a total component cost. Costs should be in current year dollars.	3.b.	Component cost (current year)Engineering and designPermitting / routing / sitingROW / land acquisitionMaterials and equipmentConstruction and commissioningConstruction managementOverheads and miscellaneous costsContingencyTotal component cost	\$ 8,250,200	\$ 129,152,329	
If this proposal is being submitted as Market Efficiency project, provide an in-service year component project total cost.	3.c.	Component cost (in-service year)	\$ 8,864,776	\$ 138,773,181	
dentify the entity who will be designated the component.	3.d.	Construction responsibility			



Instructions		Inputs
Provide the corresponding component number from the "Project Components" tab of the proposal template.	4.a.	Component number 1
dentify the line terminal points. Add additional spaces if required.	4.b.	Terminal points
		Existing Line Physical Characteristics
rovide the size and type conductor that will be removed.	4.c.	Existing conductor size and type
licate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.	4.d.	Existing hardware plan new hardware will be used
	4.e.	Existing tower line characteristics
rovide the condition and age of the existing structures. Describe the findings of any recent inspections or analysis that has indicated a need for structural repair or reinforcement to re-conductor the line.		unknown
escribe the terrain that the existing line traverses. Additionally, provide a Google Earth .KMZ file with the xisting line path as an included document with the project proposal package.	4.f.	Terrain description relatively flat, mostly open space
		Reconductor/Rebuild Component Plan
Provide the target ratings for the line.	4.g.	Component target ratings 335
rovide the type and size of the conductor to be installed.	4.h.	Proposed conductor size and type
the shield wire is to be replaced, identify the type and size to be used.	4.i.	Proposed shield wire size and type
escribe the amount of the line that is anticipated to be rebuilt versus reconductored. Provide any ssumptions that were used in arriving at this determination. If specific line sections have been identified or rebuild, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the reas.	4.j.	Rebuild portion It is assumed that the entire line would need to be rebuilt identified congestion on the facility. MetEd is the owner the line upgrade.
Describe the segments of the existing right-of-way that will need to be expanded or any newly required ights-of-way that will be required. If new or expanded right-of-way is required, provide route maps for (or pecify in a Google Earth .KMZ file) those segments and identify the areas.	4.k.	Right of way No additional ROW should be needed. The line should be pole towers that require less width than the existing lattic
Describe any files or information that has been redacted from this section and provide the basis for the edaction.	4.I.	Redacted information

- 1
Hunterstown 115 kV bus (MetEd) Lincoln 115 kV bus (MetEd)
unknown
MVA normal / 437 MVA emergency (summer)
2167 kcmil 72/7 ACSR
unknown
to achieve ratings necessary to alleviate the of the facility and would be assigned responsibility for
e able to be rebuilt within the existing ROW using e towers.



Instructions		Inputs - 1
Provide the corresponding component number from the "Project Components" tab of the proposal templat	te. <b>7.a.</b>	Component number 2a
Provide the name for the proposed substation.	7.b.	Proposed substation name Peach Bottom West
Provide the latitude and longitude (in decimal degrees) of the site(s) evaluated for the substation.	7.c.	Evaluated location(s)
Provide a general description of the substation. Also, provide a single line diagram and general arrangement	7.d.	Substation description substation will contain a 230 kV bus in a breaker and a half configuration with a total of eight positions for
drawing. Describe the major substation equipment and provide the equipment ratings.	7.e.	connecting existing and new transmission facilities         Substation equipment         230 kV bus in breaker and a half configuration with four strings and three circuit breakers per string; rating of bus and circuit breakers will not limit rating of any connected facilities; rating of circuit breakers will exceed required fault interrupting capability
Describe the required site size, geography and current land use for the proposed site(s).	7.f.	Geography and land use eight acres of land is estimated to be required; potential location is just across from the existing Peach Botto North substation; potential site is presently unoccupied and used as ROW for existing aerial transmission lines that will either be connected to new substation or moved to the side of the new substation
Provide an assessment of the potential environmental impacts (i.e. environmental impact study requirements, environmental permitting, sediment, and erosion control issues).	7.g.	Environmental assessment An environmental assessment study will be performed prior to construction to identify and mitigate any potential environmental impacts. All environmental permits and requirements related to construction and operation of a new electric substation will be obtained and followed.
Community and landowner outreach plan	7.h.	Outreach plan The potential site for the proposed switching station is located within existing transmission line ROW just across from a major transmission substation. The site is owned by and is presently unoccupied oper land, with few surrounding residents. However, will reach out and address any nearby resident or community concerns related to the building and operation of the new substation.
Provide the project land acquisition plan and approach for both public and private lands.	7.i.	Land acquisition plan The potential site is owned by and it is not anticipated that the acquisition of additional land will be necessary.
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	7.j.	Redacted information



Instructions			Input
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a.	Component number	2t
Identify the name of the existing substation where the upgrade will take place.	5.b.	Substation	
	5.c.	Substation upgrade scope	
Describe the scope of the upgrade work at the identified substation.		existing substation will be expanded to add a posit new 500-230 kV transformer	ion to t
	5.d.	New equipment description	
Describe any new substation equipment and provide the equipment ratings.		500 kV bus section with two circuit breakers; rating connected facilities; rating of circuit breakers will e	•
	5.e.	Substation assumptions	
Describe the assumptions that were made about the substation that were used in developing the scope and cost for he upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the substation or the relocation of existing equipment.		expansion will require regrading of sloped area adj is included in cost estimate	jacent t
If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.	5.f.	Substation drawings	
If the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.	5.g.	Real-estate plan the substation fence will need to be expanded, but	t the pro
Describe any files or information that has been reducted from this section and provide the basis for the	5.h.	Redacted information	
Describe any files or information that has been redacted from this section and provide the basis for the redaction.			

ts-1
b
Peach Bottom South
the existing 500 kV bus and facilitate connection of a
s and circuit breakers will not limit rating of any required fault interrupting capability
to east side of substation, however, this additional cost
operty required is owned by Exelon



Instructions			Input
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a.	Component number	2
dentify the name of the existing substation where the upgrade will take place.	5.b.	Substation	
	5.c.	Substation upgrade scope	
escribe the scope of the upgrade work at the identified substation.		install a new 500-230 kV transformer and short kV bus to new Peach Bottom West 230 kV subs	
	5.d.	New equipment description	
escribe any new substation equipment and provide the equipment ratings.		500-230 kV transformer consisting of three sing 1839 MVA emergency; 230 kV transmission line and 1770 MVA emergency	<b>.</b>
	5.e.	Substation assumptions	
escribe the assumptions that were made about the substation that were used in developing the scope and cost for ne upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the ubstation or the relocation of existing equipment.		The connection for the Peach Bottom-Keeney 5 position created as part of the substation expan position presently occupied by the Peach Botton	nsion and
f the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.	5.f.	Substation drawings	
	5.g.	Real-estate plan	
f the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.			
	5.h.	Redacted information	
Describe any files or information that has been redacted from this section and provide the basis for the redaction.			

's-1
с
Peach Bottom South
ansmission line to connect Peach Bottom South 500
s with a total summer rating of 1479 MVA normal and e in length with summer rating of 1462 MVA normal
e at Peach Bottom will be moved to the new bus the new transformer will be connected to the bus / line.



Instructions		
Provide the corresponding component number from the "Project Components" tab of the proposal template.	4.a.	Component number
Identify the line terminal points. Add additional spaces if required.	4.b.	Terminal points
		Existing Line Physical Characteristics
Provide the size and type conductor that will be removed.	4.c.	Existing conductor size and type
Indicate whether the existing line hardware will be reused. If so, provide the age and condition of the hardware.	4.d.	Existing hardware plan
	4.e.	Existing tower line characteristics
Provide the condition and age of the existing structures. Describe the findings of any recent inspections or of analysis that has indicated a need for structural repair or reinforcement to re-conductor the line.		age is approximately 60 years; a detailed condition
Describe the terrain that the existing line traverses. Additionally, provide a Google Earth .KMZ file with the existing line path as an included document with the project proposal package.	4.f.	Terrain description relatively flat or gently sloping, mostly open space
		Reconductor/Rebuild Component Plan
Provide the target ratings for the line.	4.g.	Component target ratings
Provide the type and size of the conductor to be installed.	4.h.	Proposed conductor size and type
If the shield wire is to be replaced, identify the type and size to be used.	4.i.	Proposed shield wire size and type
Describe the amount of the line that is anticipated to be rebuilt versus reconductored. Provide any assumptions that were used in arriving at this determination. If specific line sections have been identified for rebuild, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas.	4.j.	Rebuild portion the entire line between the new Peach Bottom Wes will be rebuilt
Describe the segments of the existing right-of-way that will need to be expanded or any newly required rights-of-way that will be required. If new or expanded right-of-way is required, provide route maps for (or specify in a Google Earth .KMZ file) those segments and identify the areas.	4.k.	Right of way No additional ROW should be needed. The double expected to fit within the space of the existing sing
Describe any files or information that has been redacted from this section and provide the basis for the	4.I.	Redacted information

- 2
Peach Bottom 230 kV bus (new PECO) Cooper 230 kV bus (PECO)
Graceton 230 kV bus(BGE)
795kcmil 30/19 ACSR
sment will be performed after project award
MVA normal / 1594 MVA emergency (summer)
2x1590 kcmil 54/19 ACSR
1-9/16 7#5 ALUMOWELD
station, Cooper substation and Graceton substation
t tower line will be a single pole structure that is uit lattice tower.



Instructions		
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a.	Component number
Identify the name of the existing substation where the upgrade will take place.	5.b.	Substation
Describe the scope of the upgrade work at the identified substation.	5.c.	Substation upgrade scope cut and connect existing Cooper-Peach Bottom Ta lines at new Peach Bottom West substation
Describe any new substation equipment and provide the equipment ratings.	5.d.	New equipment description short sections of transmission line (one or two spa circuit breakers on resulting tie lines between Pear kV bus; ratings on short sections connecting both exceed present ratings of those lines; resulting tie Peach Bottom will be built with 2x1590 kcmil 54/19 and 1770 MVA emergency
Describe the assumptions that were made about the substation that were used in developing the scope and cost for the upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the substation or the relocation of existing equipment.	5.e.	Substation assumptions the two circuit breakers that will be added to the tw located inside Peach Bottom North substation
If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.	5.f.	Substation drawings
If the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.	5.g.	Real-estate plan
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h.	Redacted information

ts-3
e
Peach Bottom West (new)
kV line and both Muddy Run-Peach Bottom 230 kV
ch) to connect existing lines to new substation; two new tom West 230 kV bus and existing Peach Bottom 230 v Run lines and Peach Bottom Tap line will meet or between new substation and existing 230 kV bus at R conductor with summer ratings of 1462 MVA normal
s that will tie the existing and new 230 kV buses will be



Instructions		In
Provide the corresponding component number from the "Project Components" tab of the proposal template.	5.a.	Component number
dentify the name of the existing substation where the upgrade will take place.	5.b.	Substation
Describe the scope of the upgrade work at the identified substation.	5.c.	Substation upgrade scope attach new Peach Bottom-Graceton 230 kV line to ex an existing string of the breaker and a half bus config
Describe any new substation equipment and provide the equipment ratings.	5.d.	New equipment description new 230 kV circuit breaker with ratings that will meet line and interrupting capability that will exceed the rec
Describe the assumptions that were made about the substation that were used in developing the scope and cost for the upgrade. For example, the use of a bay that appears to be available, the proposed use of an open area within the substation or the relocation of existing equipment.	5.e.	Substation assumptions a line position can be created by adding a circuit brea bus configuration
If the upgrade changes or expands upon the substation configuration provide a single line diagram and a station general arrangement drawing. These documents should be provided on the 'Redacted Information' tab under the appropriate project component.	5.f. 5.g.	Substation drawings Real-estate plan
If the substation fence needs to be expanded, indicate the real-estate plan for acquiring the needed land. Also, provide a Google Earth .KMZ file detailing the expansion.		
Describe any files or information that has been redacted from this section and provide the basis for the redaction.	5.h.	Redacted information

uts-4
2f
Graceton
ting bus at Graceton by adding a new circuit breaker to ation
exceed the ratings of the new Peach Bottom-Graceton ared fault interrupting capability
er to one of the existing strings of the breaker and a half



#### 9. Project Financial Information Instructions Inputs **Project Schedule** Capital spend start date (Mo-Yr) Apr-20 Provide the planned construction period, include the month 9.a. and year of when capital spend will begin, when construction will begin and when construction will end. The final Construction start date (Mo-Yr) Apr-21 construction month should be the month preceding the commercial operation month. Commercial operation date (Mo-Yr) May-24 **Project Capital Expenditures** Provide, in present year dollars, capital expenditure estimates **9.b.** Capital expenditure details Total 2020 2021 2 by year for the Proposing Entity, work to be completed by Engineering and design others (e.g. incumbent TO) and total project. Capital expenditure estimates should include all capital expenditure, Permitting / routing / siting including any ongoing expenditures, for which the Proposing ROW / land acquisition Entity plans to seek FERC approval for recovery. Materials and equipment Construction and commissioning **Construction management** Overheads and miscellaneous costs Contingency **Proposer total capex** Work by others capex \$ 137,402,529 | \$ 5,889,774 | \$ 33,113,001 | \$ 35, Total project capex Even if AFUDC is not going to be employed, provide a yearly 2020 2021 9.c. Total 2 AFUDC cash flow. AFUDC \$ 25,152,347 \$ 403,584 \$ 2,672,579 \$ 5 Assumptions for the capital expenditure Provide any assumptions for the capital expenditure estimate 9.d. (e.g. design assumptions, weather, manpower needed and estimate work schedule, number of hours per day, construction area assumes standard seasonal weather and permitting schedule **Redacted information** Describe any files or information that has been redacted from **9.e.** this section and provide the basis for the redaction.

2022	2023	2024	2025
500.000	<b>•</b> •= = • • • • • •	<b>♠</b>	
,588,263	\$ 35,588,263	\$ 27,223,228	

2022	2023	2024	2025
5,111,186	\$ 7,549,793	\$ 9,415,205	



t Containment Commitment			
Instructions		Inputs	
	10.a.	Cost containment commitment description	
Provide a description of the cost containment mechanism being proposed.			
	10.b.	Project scope covered by the cost containment commitment	
Indicate what project scope is covered by the proposed cost containment commitment. Identify the components covered by number.			
Provide, in present year dollars and year of occurrence dollars, the Proposing Entity's proposed binding cap on capital expenditures.	10.b.i.	Cost cap in present year dollars Cost cap in in-service year dollars	
Provide any additional information related to the cap on capital expenditures, including but not limited to: if AFUDC is included in the cap, if all costs prior to commercial operation date are included in the cap, if the cap includes a variable or fixed inflation rate, etc.	10.b.ii.	Additional Information on cost cap:	<u> </u>
	10.b.iii	Cost containment capital expenditure exemptions	
		Capital cost component	Component covered by cost containment
		Engineering and design	Choose Yes or No
	-	Permitting / routing / siting	Choose Yes or No
	-	ROW / land acquisition	Choose Yes or No
Indicate which components of capital costs fall under the cost cap.	-	Materials and equipment	Choose Yes or No
		Construction and commissioning	Choose Yes or No
		Construction management	Choose Yes or No
		Overheads and miscellaneous costs	Choose Yes or No
	-	Taxes	Choose Yes or No
	-	AFUDC	Choose Yes or No
		Escalation	Choose Yes or No

I			



10. Cost Containment Commitment Instructions		Inputs
	10.c.	Describe any other Cost Containment Measures not covered above:
Describe any other cost containment measures not detailed above.		
Provide language to be included in the Designated Entity Agreement that expresses the legally binding commitment of the developer to the construction cost cap.	10.d.	Cost Commitment Legal Language

