BUDGET JUSTIFICATION GUIDANCE
(JUNE 2011)

General	Applicants are required to complete and submit a Budget Justification Workbook to accompany and justify the costs listed in the SF-424A ("Budget Information – Non-Construction Programs") submitted with their Full Application. When completing the Budget Justification Workbook, please adhere to the following guidelines: - The Budget Justification Workbook must be submitted in Microsoft Excel format. Please refer to ARPA-E's website (http://arpa-e-foa.energy.gov/) for the Budget Justification Workbook template. - Applicants must complete each tab of the Budget Justification Workbook for the project as a whole and provide requested documentation (e.g., a Federally-approved forward pricing rate agreement, Defense Contract Audit Agency or Government Audits and Reports, if available). The term "tab" refers to a worksheet within the Budget Justification Workbook. Each tab may be found and accessed at the bottom of the Workbook page. - For costs in each budget category in the SF-424A, complete the corresponding tab in this Workbook. The totals in each budget category and the Total Project Cost must be the same in the SF-424A and the Budget Justification Workbook. - The total budget presented in the Budget Justification Workbook and the SF-424A must include both Federal (ARPA-E) and Non-Federal (cost share) expenditures, the sum of which equals the Total Project Cost proposed by the Applicant. All costs, whether paid with Federal funding or by the Project Team, must be justified. - All expenditures must be allowable, allocable, and reasonable in accordance with the applicable Federal cost principles. - No individual may be paid more than $200,000 per year under an ARPA-E funding agreement.
Who Must Complete the Budget Justification Workbook	- The Prime Recipient must complete a Budget Justification Workbook to justify its proposed budget. - Each Subrecipient incurring greater than or equal to 10% of the Total Project Cost must complete separate tabs in the Budget Justification Workbook to justify its proposed budget. The tabs must be included in the Prime Recipient's Budget Justification Workbook. - Subrecipients incurring less than 10% of the Total Project Cost are <u>not</u> required to complete separate tabs. However, such Subrecipients are required to provide supporting documentation to justify their proposed budgets. At a

	minimum, the supporting documentation must show which tasks in the Statement of Project Objectives and accompanying Technical Milestones and Deliverables are being performed, the purpose/need for the effort, and a sufficient basis for the estimated costs. The documentation may be submitted in any format.
STEP 1: **Review the Instructions and Summary**	The "Instructions and Summary" tab provides instructions on the completion of the Budget Justification Workbook. Under this tab, you are required to provide a summary of the Total Project Cost, including costs in each budget category for each year of the project for the entire budget period. After completing each tab, insert the total cost calculated on each tab into the appropriate cells on the summary table.

STEP 2:

Complete

Tab A: Personnel

Under the "Personnel" tab, Applicants must provide and justify proposed costs related to personnel for each year of the project for the entire budget period. Personnel information for the Project Team should be entered as follows:

- Applicants must specifically list the positions necessary to perform the proposed work (e.g., senior scientist, technician) in the "Personnel" tab.

- Lists costs solely for employees of the entity or organization completing the tab (Prime Recipient or Subrecipient)

- All other personnel costs—including Subrecipients (partners, subawardees), Vendors (contractors and consultants), and FFRDCs that will perform <u>less than 10%</u> of the Total Project Cost—must be entered under the "Contractual" (tab f). Each Subrecipient, Vendor, and FFRDC that will incur <u>greater than or equal to 10%</u> of the Total Project Cost—must also be entered under the "Contractual" (tab f) and must complete a separate SF-424A and Budget Justification Workbook to justify it proposed budget.

For your convenience, ARPA-E provides the following supplemental guidance on completing the "Personnel" tab:

Task # and Title	• Identify the Task # and Title.
Position Title	• Identify key personnel by title. • Identify all other personnel either by title or by a group category. • If more than one employee is anticipated for a particular position or group category, the number of full-time employees that will be employed in each position or group category should be stated in parentheses next to the Position Title (e.g., Electrical Engineers (2) for two electrical engineers).
Time (Hours)	• In hours, state the total amount of time anticipated for each position or group category per Budget Year.

		• Include all anticipated group members when calculating time (e.g., electrical engineers (2) working full time — 2,080 Hrs/Yr per engineer — would yield 4,160 total hours for the year).
	Pay Rate ($/Hr)	State the base pay rate per hour for the position (e.g., $40/Hr for the position of electrical engineer). Note: If composite rates are proposed for a particular position or group category, please provide a list of the proposed personnel and rates/hours used to compute the composite rates in the "Additional explanation/comments" box, as applicable. If you are proposing escalation rates for the labor rates, please explain in the "Additional explanation/comments" box, as applicable.
	Total Budget Year	Multiply the "Time (Hours)" column by the "Pay Rate ($/Hr)" column (e.g., $166,400 for the two electrical engineers).
	Project Total Hours	Add the total "Time (Hours)"
	Project Total Dollars	Add the total "Total Budget Period"
	Rate Basis	Identify the basis for the pay rate used (e.g., actual salary, composite rate, labor distribution report, technical estimate, state civil service rates, etc.). If composite rates are being proposed for a particular position or group category, please state the rate basis as a composite rate. If new hires are proposed, please explain the basis for how you determined their hourly rate. If Applicants are selected for award negotiations, they will be required to provide payroll information or a certification statement to verify that the proposed rates are the actual rates being paid to the proposed individuals within 2 days after receiving the award notification. Such documentation should be submitted to the ARPA-E Contracting Officer at ARPA-E-CO@hq.doe.gov. In the subject line of the email, please state "Pay Rate Information" and include the Applicant's name, FOA name and number, and application control number.
	Total Personnel Costs	Insert the grand total for each column and category.
STEP 3: **Complete** **Tab B: Fringe Benefits**	Under the "Fringe Benefits" tab, Applicants must provide and justify proposed costs related to Fringe Benefits for each Budget Year. If requesting reimbursement for fringe benefits, the Applicant must submit a Federally approved fringe benefit rate agreement. This information is also required for Subrecipients, Vendors, and FFRDCs proposed under the "Contractual" tab. Applicants must submit this information with the Full Application. For your convenience, ARPA-E provides the following supplemental guidance on completing the "Fringe Benefits" tab:	
	Rate Applied	Using the most recent approved rate agreement negotiated and available or submitted rate proposal, calculate the fringe rate for each Budget Year.

	Total Fringe Requested	Using the most recent approved rate agreement negotiated and available or submitted rate proposal, calculate the total amount of fringe benefits requested for each Budget Year.
	Total	Add the Total Fringe Requested for all Budget Years and insert the sum in the "Total" column.
	Federally Approved Rate Agreement	Check (X) the appropriate box in the Budget Justification Workbook depending on whether a current, Federally approved rate agreement is negotiated and available. If so, it must be submitted with the Full Application. • Include a copy of the latest fringe benefit rate agreement (if available) that has been negotiated with, or approved by, a Federal agency. • If the ARPA-E Contracting Officer has a copy of the current rate agreement (e.g., from a previous ARPA-E Award), indicate that fact and state the award number in the "Additional explanation/comments" box.
	If no Federally Approved Rate Agreement is available	• If an Applicant is selected for award negotiations and does not have a Federally approved fringe benefit rate agreement, then the Applicant is required to submit an Indirect Rate Proposal to the ARPA-E Contracting Officer. A template for Indirect Rate Proposals is available at http://arpa-e.energy.gov/FundingAgreements/Overview.aspx. The Applicant must provide this information to the ARPA-E Contracting Officer at ARPA-E-CO@hq.doe.gov within 2 days after the receiving the award notification. In the subject line of the email, please state "Rate Proposal" and include the Applicant's name, FOA name and number, and application control number.
STEP 4: **Complete** **Tab C: Travel**	Under the "Travel" tab, Applicants must itemize all proposed travel and state a justification of need for each Budget Year. All Applicants must budget for one visit with ARPA-E Program Directors in Washington, D.C.. This travel is not required of Subrecipients. In addition to the required annual trips, Applicants may list travel that they deem necessary for performance of the Statement of Project Objectives and accompanying Technical Milestones and Deliverables. *Note: Travel to the annual ARPA-E Energy Innovation Summit must be proposed under the "Other Direct Cost" tab for each Budget Year. Non-travel related expenses for the ARPA-E Annual Energy Summit must be approved in advance by the ARPA-E Contracting Officer. Applicants must submit requests to the ARPA-E Contracting Officer at ARPA-E-CO@hq.doe.gov. at least 30 days in advance of the ARPA-E Annual Summit. In the subject line of the email, please state "Request for Non-Travel Expenses for ARPA-E Energy Innovation Summit" and include the Applicant's name, FOA name and number, and application control number.*	

	For your convenience, ARPA-E provides the following supplemental guidance on completing the "Travel" tab:	
	Purpose of Travel	Justify each travel request in the "Purpose of Travel" column (e.g., a professional conference, a DOE sponsored meeting, a project management meeting, etc.) with as many specific details as are available (including dates and location).
	No. of Travelers	State the number of travelers requested for the proposed travel.
	No. of Days	State the duration of travel in days.
	Cost per Traveler	State the requested travel costs for each trip, per traveler.
	Cost per Trip	• Multiply the "No. of Travelers" column by the "Cost per Traveler" column. • Insert the sum in the "Cost per Trip" column.
	Basis for Estimating Costs	• Indicate the basis for estimating the listed travel costs (e.g., past trips, current quotations, Federal Travel Regulations, etc.) in the "Basis for Estimating Costs" column.
	International Travel	• List international travel separately from domestic travel, in the appropriate sections. • For international travel, state the departure and arrival locations in the "Depart From" and "Destination" columns. This information is not required for domestic travel.
	Project Total	Insert the grand total for each column and category.
STEP 5: **Complete** **Tab D:** **Equipment**	Under the "Equipment" tab, Applicants must itemize all proposed equipment and state a cost justification for each Budget Year. Equipment is generally defined as an item with an acquisition cost greater than $5,000 and a useful life expectancy of more than one year.[1] For your convenience, ARPA-E provides the following supplemental guidance on completing the "Equipment" tab:	
	Equipment Item	State the type of equipment requested (e.g., thermal shock chamber).
	Qty	State the number of units requested.
	Unit Cost	State the estimated cost for one unit of the item requested.
	Total Cost	Multiply the "Qty" column by the "Unit Cost" column and insert sum in "Total Cost."
	Basis of Cost	State a cost justification (e.g., vendor quotes, catalog prices, prior invoices) for the proposed equipment. • For items over $50,000, provide a copy of the associated vendor quote or catalog price list. • If contributing existing equipment as cost share, provide logical support for the estimated value shown in the "Basis of Cost" column (e.g., Federal depreciation amounts subtracted from purchase price). • If new equipment is proposed that will retain a useful life upon completion of the project, provide

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[1] 10 C.F.R. § 600.101.

For questions regarding this FOA, email ARPA-E-CO@hq.doe.gov

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		logical support for the estimated use value during the project.
	Justification of Need	Explain how each proposed equipment item applies to the Statement of Project Objectives and accompanying Technical Milestones and Deliverables.
	Project Total	Insert the grand total for each column and category.
STEP 6: **Complete** **Tab E: Supplies**	Applicants must itemize all proposed supplies under the "Supplies" tab for each Budget Year. Supplies are generally defined as items with an acquisition cost of $5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance.[2] Supplies are *direct* costs and should not be duplicative of supply costs that are included in the indirect pool that is the basis of the proposed indirect rate applied for the project. For your convenience, ARPA-E provides the following supplemental guidance on completing the "Supplies" tab:	
	General Category of Supplies	State the general type of supplies requested (e.g., test tubes).
	Qty	State the number of units requested.
	Unit Cost	State the estimated cost for one unit of the supplies requested.
	Total Cost	Multiply the "Qty" column by the "Unit Cost" column and insert sum in "Total Cost."
	Basis of Cost	State a cost justification (e.g., vendor quotes, catalog prices, prior invoices, etc.) for the proposed supplies. If contributing existing supplies as cost share, provide logical support for the estimated value shown.
	Justification of Need	Explain how proposed supplies apply to the Statement of Project Objectives and accompanying Technical Milestones and Deliverables.
	Project Total	Insert the grand total for each column and category.
STEP 7: **Complete** **Tab F: Contractual**	Applicants must provide and justify proposed costs related to Subrecipients, vendors, contractors, consultants, and FFRDC partners under the "Contractual" tab for each Budget Year. It is the Applicant's responsibility to ensure that adequate supporting documentation is provided with the Full Application. For your convenience, ARPA-E provides the following supplemental guidance on completing the "Contractual" tab:	
	Subrecipients (includes Partners and Subawardees)	List all Subrecipients: • Each Subrecipient incurring greater than or equal to 10% of the Total Project Costs must complete a separate SF-424A and separate Budget Justification worksheets to justify its proposed budget. The Subrecipient's SF-424A must be inserted as additional sheets within the Prime Recipient's SF-424A. The Subrecipient's Budget Justification worksheets must be inserted as additional tabs within the Prime

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[2] 10 C.F.R. § 600.101.

		Recipient's Budget Justification Workbook. The Subrecipients' SF-424As and Budget Justification Workbooks may be completed by either the Subrecipients themselves or by the preparer of this workbook. The budget totals on the Subrecipients' workbooks must match the Subrecipient entries described below.
		• Subrecipients incurring less than 10% of the Total Project Costs are not required to complete a separate SF-424A and Budget Justification workbook. However, such Subrecipients are required to provide supporting documentation to justify their proposed budgets. At a minimum, the supporting documentation must include a sufficient basis for the estimated costs for ARPA-E evaluation. Please also refer to instructions in Tabs B and I regarding Fringe Benefit and Indirect Rate Submissions.
		• For each Subrecipient, in the "Purpose/Tasks in SOPO" column, state the task(s) in the Statement of Project Objectives and accompanying Technical Milestones and Deliverables that the Subrecipient would perform.
		• For each Subrecipient, insert proposed costs for each Budget Year and add each year together to calculate the Project Total costs.
		• For each Subrecipient, insert the subtotals for each category.
	Vendors (includes contractors and consultants)	• List all vendors, contractors, and consultants that will provide commercial supplies or services to support the proposed project.
		• Under the "Product or Service, Purpose/Need and Basis of Cost" column, provide support to justify vendor costs (of any amount) by identifying the purpose for the products or services and identifying the basis of the estimated costs (e.g., vendor quotes, prior invoices, etc.)
		• Insert proposed costs for each Budget Year and add each year together to calculate the Project Total costs.
		• Insert the subtotals for each category.
	Federally-Funded Research and Development Centers (FFRDCs)	List all FFRDCs:
		• Each FFRDC incurring greater than or equal to 10% of the Total Project Costs must complete a separate SF-424A and separate Budget Justification worksheets to justify its proposed budget. The FFRDC's SF-424A must be inserted as additional sheets within the Prime Recipient's SF-424A. The FFRDC's Budget Justification worksheets must be inserted as additional tabs within the Prime Recipient's Budget Justification Workbook. The FFRDC workbooks may be completed by either the Subrecipients themselves or by the preparer of this workbook. The budget totals on the Subrecipient's SF-424A and Budget Justification Workbook must match the Subrecipient entries described below. DOE/NNSA FFRDCs are also required to submit a Field Work Proposal in accordance with the instructions in DOE O

		412.1, "Work Authorization System" (http://management.energy.gov/business_doe/business_forms.htm) in the Technical Volume of the Full Application. • FFRDCs incurring less than 10% of the Total Project Cost are not required to complete a separate SF-424A and Budget Justification Workbook. However, FFRDCs are required to provide supporting documentation to justify their proposed budgets. At a minimum, the supporting documentation must include a sufficient basis for the estimated costs for ARPA-E evaluation. All DOE/NNSA FFRDCs are also required to submit a Field Work Proposal. Please also refer to instructions in Tabs B and I regarding Fringe Benefit and Indirect Rate Submissions. • For each FFRDC, under the "Purpose" column, state the task(s) in the Statement of Project Objectives and accompanying Technical Milestones and Deliverables that will be performed by the FFRDC. • For each FFRDC, insert proposed costs for each budget year and add each year together to calculate the Project Total costs. • For each FFRDC, insert the subtotals for each category.
	Total Contractual	• Insert the grand total for each column and category.
STEP 8: **Complete** **Tab G: Construction**	Applicants must provide and justify proposed costs related to Construction under the "Construction" tab for each Budget Year. Construction is defined as all types of work done on a particular facility—including erecting, altering, or remodeling. Construction work is generally not included as part of ARPA-E awards because Applicants generally do not request funding for construction work they plan to perform themselves, and construction performed by a vendor or Subrecipient should be entered under the "Contractual" tab. For your convenience, ARPA-E provides the following supplemental guidance should Applicants choose to complete the "Construction" tab:	
	General Description	Provide a description of the actual construction work that would be funded under the project.
	Cost	State the total amount expected for the proposed construction activity. Insert the subtotal for each Budget Year.
	Basis of Cost	• Provide a basis for the estimated costs sufficient for ARPA-E evaluation. • Provide supporting documentation (e.g., engineering estimate or quote) in the Full Application.
	Justification of Need	State the need for the requested construction activity as it applies to the Statement of Project Objectives and accompanying Technical Milestones and Deliverables.

	Project Total	Insert the grand total for the cost column.

| **STEP 9:**

Complete

Tab H:
Other Direct
Costs | Under the "Other Direct Costs" tab, Applicants must provide and justify proposed costs related to Other Direct Costs for each year of the entire budget period. Other Direct Costs are direct cost items required for the project which do not fit clearly into other categories, and are not included in the indirect pool for which the indirect rate is being applied to this project. Other Direct Costs include Technology Transfer and Outreach (TT&O) activities. Examples of TT&O activities that are allowable under Federal costs principles are provided in Section IV.G.8 of the FOA. Applicants must provide a basis of cost (e.g., vendor quotes, prior purchases of similar or like items, published price list, etc.).

Note for TT&O activities:

Every Project Team is required to spend at least 5% of ARPA-E funding on TT&O activities to promote and further the development and deployment of ARPA-E-funded technologies. All budget activities must relate to achieving specific objectives, Technical Milestones and Deliverables outlined in the Statement of Project Objectives. Applicants must list TT&O costs with a clear description of what activities are to take place (e.g. travel to the Annual ARPA-E Innovation Summit, work devoted to a commercialization plan, etc.).

Only TT&O costs that relate to a specific technology funded by ARPA-E will be allowed, if the costs are allowable in accordance with Federal cost principles. For TT&O activities aimed at advancing a portfolio of technologies and/or products owned by the Recipient or Project Partner, only the portion of costs specifically attributable to advancing the ARPA-E funded technology will be reimbursed. Applicants are required to certify in the Full Application that they have met the 5% requirement for TT&O expenditures in their SF-424A and Budget Justification unless they submit an accompanying waiver request. Applicants may seek a waiver of the TT&O requirement in whole or in part by including an explicit request in their Full Application. In their request, Applicants must describe the proposed technology's stage of development (i.e., early-stage or late-stage) with reference to Technology Readiness Levels (TRLs). In addition, Applicants must describe in detail why the TT&O requirement should not be applied to their project or why they are proposing less than the required 5%.

Note for Patent Costs:

ARPA-E will reimburse up to $15,000 in expenditures incurred under the funding agreement for costs and fees relating to the filing and prosecution of U.S. patent applications on subject inventions disclosed to ARPA-E and DOE in accordance with Attachment 2 to the funding agreement (http://arpa-e.energy.gov/FundingAgreements/CooperativeAgreements.aspx). Prime Recipients may use costs and fees in excess of $15,000 to meet their cost share obligations under the funding agreement.

ARPA-E will not reimburse any costs and fees relating to the filing and prosecution of foreign patent applications on subject inventions disclosed to ARPA-E and DOE in accordance with Attachment 2 to the funding agreement. However, Prime Recipients may use such costs and fees to meet their cost share obligations.

For examples of allowable patent costs, please see Section IV.G.3 of the FOA. |

	For your convenience, ARPA-E provides the following supplemental guidance on completing the "Other Direct Costs" tab:	
	General Description	Provide a description of the requested cost items (e.g., graduate student tuition, ARPA-E Energy Summit travel and registration).
	Cost	State the total amount expected for the proposed cost item. Insert the subtotal for each Budget Year.
	Basis of Cost	• Provide a basis for the estimated costs sufficient for DOE evaluation. • Provide supporting documentation (e.g., documentation containing the graduate student tuition amount for the given year).
	Justification of Need	State the need for the requested cost item as it applies to the Statement of Project Objectives and accompanying Technical Milestones and Deliverables (e.g., to support graduate students working on the project).
	Project Total	Insert the grand total for the cost column.
STEP 10: **Complete** **Tab I: Indirect Costs**	Under the "Indirect Costs" tab, Applicants must provide and justify proposed costs related to Indirect Costs for each year of the entire budget period. If requesting reimbursement for indirect costs, the Applicant must submit a Federally approved indirect rate agreement. Applicants must provide this information for each Budget Year. This information is also required for Subrecipients, Vendors, and FFRDCs proposed under the "Contractual" tab. Applicants must submit this information with the Full Application. For your convenience, ARPA-E provides the following supplemental guidance on completing the "Indirect Costs" tab:	
	Rate Applied	Using the most recent approved rate agreement negotiated and available or submitted rate proposal, calculate the indirect rate for each Budget Year.
	Total Indirect Costs Requested	Using the most recent approved rate agreement negotiated and available or submitted rate proposal, calculate the total indirect costs requested for each Budget Year.
	Total	Add the Total Indirect Costs Requested for all Budget Years and insert the sum in the "Total" column.
	Federally Approved Rate Agreement	Check (X) the appropriate box in the Budget Justification Workbook depending on whether a current, Federally approved indirect rate agreement is negotiated and available and it must be submitted with the Full Application. • Include a copy of the latest indirect rate agreement (if available) that has been negotiated with, or approved by, a Federal agency. • If the ARPA-E Contracting Officer has a copy of the current rate agreement (e.g., from a previous ARPA-E Award), indicate that fact and state the award number in the "Additional explanation/comments" box.

	If no Federally Approved Rate Agreement	• If an Applicant is selected for award negotiations and does not have a Federally approved Indirect Rate Proposal, then the Applicant is required to submit an Indirect Rate Proposal to the ARPA-E Contracting Officer. A template for Indirect Rate Proposals is available at http://arpa-e.energy.gov/FundingAgreements/Overview.aspx. The Applicant must provide this information to the ARPA-E Contracting Officer at ARPA-E-CO@hq.doe.gov within 2 days after the receiving the award notification. In the subject line of the email, please state "Rate Proposal" and include the Applicant's name, FOA name and number, and application control number.
STEP 11: **Complete** **Cost Share Tab**	Under the "Cost Share" tab, Applicants must provide and justify proposed costs related to Cost Share for each year of the entire budget period. Applicants must provide a detailed explanation of the cash or cash value of all cost share proposed for the project. Please refer to Section III.B of the FOA for guidance on allowable cost share contributions. Applicants selected for award negotiations must provide cost share commitment letters, as described in Section VI.B.3 of the FOA. This information must be provided to the ARPA-E Contracting Officer at ARPA-E-CO@hq.doe.gov within 2 days after receiving the award notification. In the subject line of the email, please state "Cost Share Information" and include the Applicant's name, FOA name and number, and application control number. Project teams are not permitted to receive fees or profits from ARPA-E awards. All monies must be spent on activities or equipment directly related to meeting the objectives in the Statement of Project Objectives and accompanying Technical Milestones and Deliverables. Additionally, foregone fee or profit by any member of the proposed Project Team may not be considered cost sharing under any resulting award.[3] For your convenience, ARPA-E provides the following supplemental guidance on completing the "Cost Share" tab:	

Organization/Source	Identify the source for each cost share contribution.
Type (cash or other)	Identify whether the cost share will be in cash contributions or in-kind contributions.
Cost Share Item	• For each non-cash contribution, specifically identify the item or services proposed and describe how the value of the cost share contribution was calculated. • Allowable in-kind contributions include but are not limited to personnel costs, indirect costs, facilities and administrative costs, rental value of buildings or equipment, and the value of a service, other resource, or third party in-kind contribution.

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[3] However, a reasonable profit or fee may be paid to consultants, contractors, and vendors under an ARPA-E award when the contractor/consultant provides supplies, equipment, or services needed to carry out the proposed project. See 10 C.F.R. §§ 600.318 and 603.230 relative to profit or fee.

	Cost Share	Insert the amount of cash or the value of each in-kind cost share item.
	Total Project Cost Share	Add the total "Cost Share" for each year together.
	Totals	Insert the grand total for each column and category.